

TALKING OF PLEASURE, THIS MOMENT I WAS WRITING WITH ONE HAND, AND WITH THE OTHER HOLDING TO MY MOUTH A NECTARINE—HOW GOOD HOW FINE. IT WENT DOWN ALL PULPY, SLUSHY, OOZY, ALL ITS DELICIOUS EMBONPOINT MELTED DOWN MY THROAT LIKE A LARGE, BEATIFIED STRAWBERRY.

—John Keats, English poet (1795–1821)

25

FRUITS



BRENNAN'S RESTAURANT, New Orleans, LA
Chef Michael Roussel

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AFTER STUDYING THIS CHAPTER, YOU WILL BE ABLE TO:

- identify a variety of fruits
- purchase fruits appropriate for your needs
- store fruits properly
- understand how fruits are preserved
- prepare fruits for cooking or service
- apply various cooking methods to fruits

Botanically, a fruit is an organ that develops from the ovary of a flowering plant and contains one or more seeds. Culinarily, a fruit is the perfect snack food; the basis of a dessert, colorful sauce or soup or an accompaniment to meat, fish, shellfish or poultry. No food group offers a greater variety of colors, flavors and textures than fruit.

This chapter identifies many of the fruits typically used by food service operations. It then addresses general considerations in purchasing fresh and preserved fruits. A discussion follows about some of the cooking methods presented in Chapter 10, Principles of Cooking, as they apply to fruits. Recipes in which a fruit is the primary ingredient are presented at the chapter's end.

IDENTIFYING FRUITS

This book presents fruits according to the ways most people view them and use them, rather than by rigid botanical classifications. Fruits are divided here into eight categories: berries, citrus, exotics, grapes, melons, pomes, stone fruits and tropicals, according to either their shape, seed structure or natural habitat. Botanically, tomatoes, beans, eggplant, capsicum peppers and other produce are fruits. But in ordinary thinking, they are not; they are vegetables and are discussed in Chapter 22, Vegetables.

A fruit may have several names, varying from region to region or on a purveyor's whim. Botanists are also constantly reclassifying items to fit new findings. The names given here follow generally accepted custom and usage.

BERRIES

Berries are small, juicy fruits that grow on vines and bushes worldwide. Berries are characterized by thin skins and many tiny seeds that are often so small they go unnoticed. Some of the fruits classified here as berries do not fit the botanical definition (for example, raspberries and strawberries), while fruits that are berries botanically (for example, bananas and grapes) are classified elsewhere.

Berries may be eaten plain or used in everything from beer to bread, soup to sorbet. They make especially fine jams and compotes.

Berries must be fully **ripened** on the vine, as they will not ripen further after harvesting. Select berries that are plump and fully colored. Avoid juice-stained containers and berries with whitish-gray or black spots of mold. All berries should be refrigerated and used promptly. Do not wash berries until you are ready to use them, as washing removes some of their aroma and softens them.

▶ **ripe** fully grown and developed; the fruit's flavor, texture and appearance are at their peak, and the fruit is ready to use as food

BLACKBERRIES

Blackberries are similar to raspberries, but are larger and shinier, with a deep purple to black color. Thorny blackberry vines are readily found in the wild; commercial production is limited. Their peak season is mid-June through August. Loganberries, Marionberries, olallie berries and boysenberries are blackberry hybrids.

BLUEBERRIES

Blueberries (Fr. *myrtilles*) are small and firm, with a true blue to almost black skin and a juicy, light gray-blue interior. Cultivated berries (high-bush varieties) tend to be larger than wild (low-bush) ones. Blueberries are native to North

America and are grown commercially from Maine to Oregon and along the Atlantic seaboard. Their peak season is short, from mid-June to mid-August.



Blackberries



Blueberries

CRANBERRIES

Cranberries, another native North American food, are tart, firm fruit with a mottled red skin. They grow on low vines in cultivated bogs (swamps) throughout Massachusetts, Wisconsin and New Jersey. Rarely eaten raw, they are made into sauce or relish or are used in breads, pies or pastries. Cranberries are readily available frozen or made into a jelly-type sauce and canned. Although color does not indicate ripeness, cranberries should be picked over before cooking to remove those that are soft or bruised. Their peak harvesting season is from Labor Day through October, leading to the association of cranberries with Thanksgiving dinner.



Cranberries

CURRANTS

Currants are tiny, tart fruits that grow on shrubs in grapelike clusters. The most common are a beautiful, almost translucent red, but black and golden (or white) varieties also exist. All varieties are used for jams, jellies and sauces, and black currants are made into a liqueur, crème de cassis. Although rarely grown in the United States, currants are very popular and widely available in Europe, with a peak season during the late summer. (The dried fruits called currants are not produced from these berries; they are a special variety of dried grapes.)



White Currants



Red Currants

RASPBERRIES

Raspberries (Fr. *framboises*) are perhaps the most delicate of all fruits. They have a tart flavor and velvety texture. Red raspberries are the most common, with black, purple and golden berries available in some markets. When ripe, the berry pulls away easily from its white core, leaving the characteristic hollow center. Because they can be easily crushed and are susceptible to mold, most of the raspberries grown are marketed frozen. They grow on thorny vines in cool climates from Washington State to western New York and are imported from New Zealand and South America. The peak domestic season is from late May through November.



Raspberries

STRAWBERRIES

Strawberries (Fr. *fraises*) are brilliant red, heart-shaped fruits that grow on vines. The strawberry plant is actually a perennial herb, the berry's flesh is covered by tiny black seeds called achenes, which are the plant's true fruits. Select berries with a good red color and intact green leafy hull. (The hulls can be easily removed with a paring knife.) Avoid berries with soft or brown spots. Huge berries may be lovely to look at, but they often have hollow centers and little flavor or juice. Although strawberries are available to some extent all year, fresh California strawberries are at their peak from April through June.

The tiny wild or Alpine berries, known by their French name *fraises des bois,* have a particularly intense flavor and aroma. They are not widely available in the United States.



Strawberries

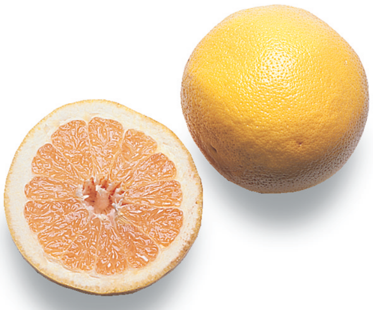
CITRUS (GENUS *CITRUS*)

Citrus fruits include lemons, limes, grapefruits, tangerines, kumquats, oranges and several hybrids. They are characterized by a thick rind, most of which is a bitter white pith (albedo) with a thin exterior layer of colored skin known as the **zest.** Their flesh is segmented and juicy. Citrus fruits are acidic, with a strong aroma; their flavors vary from bitter to tart to sweet.

Citrus fruits grow on trees and shrubs in tropical and subtropical climates worldwide. All citrus fruits are fully ripened on the tree and will not ripen further after harvesting. They should be refrigerated for longest storage.

▶ **zest** the colored outer portion of the rind of citrus fruit; contains the oil that provides flavor and aroma

Select fruits that feel heavy and have thin, smooth skins. Avoid those with large blemishes or moist spots.



White Grapefruits

GRAPEFRUITS

Grapefruits (Fr. *pamplemousse*) are large and round with a yellow skin, thick rind and tart flesh. They are an 18th-century hybrid of the orange and pummelo (a large, coarse fruit used mostly in Middle and Far Eastern cuisines). Two varieties of grapefruit are widely available all year: white-fleshed and pink- or ruby-fleshed. White grapefruits produce the finest juice, although pink grapefruits are sweeter. Fresh grapefruits are best eaten raw or topped with brown sugar and lightly broiled.



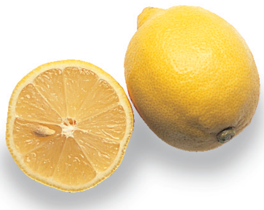
Red Grapefruits



Kumquats

KUMQUATS

Kumquats are very small, oval-shaped, orange-colored fruits with a soft, sweet skin and slightly bitter flesh. They can be eaten whole, either raw or preserved in syrup, and may be used in jams and preserves.



Lemons

LEMONS

The most commonly used citrus fruits, lemons (Fr. *citrons*), are oval-shaped, bright yellow fruits available all year. Their strongly acidic flavor makes them unpleasant to eat raw but perfect for flavoring desserts and confections. Lemon juice is also widely used in sauces, especially for fish, shellfish and poultry. Lemon zest is candied or used as garnish.



Limes

LIMES

Limes (Fr. *limons*) are small fruits with thin skins ranging from yellow-green to dark green. Limes are too tart to eat raw and are often substituted for lemons in prepared dishes. They are also juiced or used in cocktails, curries or desserts. Lime zest can be grated and used to give color and flavor to a variety of dishes. Limes are available all year; their peak season is during the summer.

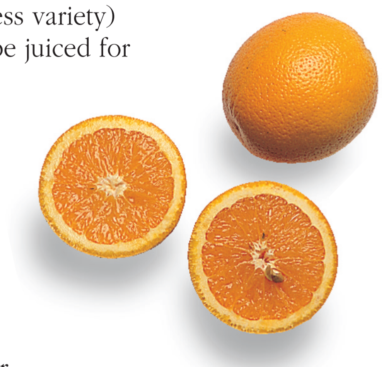


Navel Oranges

ORANGES

Oranges (Sp. *naranja*) are round fruits with a juicy, orange-colored flesh and a thin, orange skin. They can be either sweet or bitter.

Valencia oranges and navel oranges (a seedless variety) are the most popular sweet oranges. They can be juiced for beverages or sauces, and the flesh may be eaten raw, added to salads, cooked in desserts or used as a garnish. The zest may be grated or julienned for sauces or garnish. Sweet oranges are available all year; their peak season is from December to April. Blood oranges are also sweet but are small, with a rough, reddish skin. Their flesh is streaked with a blood-red color. Blood oranges are available primarily during the winter months and are eaten raw, juiced or used in salads or sauces. When selecting sweet oranges, look for fruits that feel plump and heavy, with unblemished skin. The color of the skin depends on weather conditions; a green rind does not affect the flavor of the flesh.



Valencia Oranges

Blood Oranges



Bitter oranges include the Seville and bergamot. They are used primarily for the essential oils found in their zest. Oil of bergamot gives Earl Grey tea its dis-

tinctive flavor; oil of Seville is essential to curaçao, Grand Marnier and orange flower water. Seville oranges are also used in marmalades and sauces for meats and poultry.

TANGERINES

Tangerines, sometimes referred to as mandarins, are small and dark orange. Their rind is loose and easily removed to reveal sweet, juicy, aromatic segments. Tangerines are most often eaten fresh and uncooked, but are available canned as mandarin oranges.

Tangelos are a hybrid of tangerines and grapefruits. They are the size of a medium orange; they have a bulbous stem end and few to no seeds.

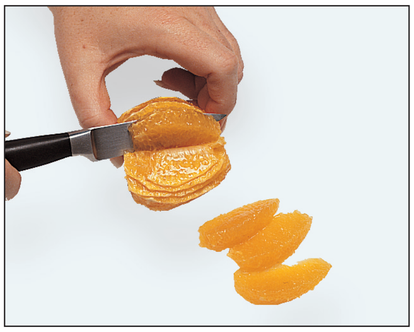


Tangerines

▶ PROCEDURE FOR SEGMENTING CITRUS FRUITS



1 Citrus segments, known as *supremes,* are made by first carefully cutting off the entire peel (including the bitter white pith) in even slices.



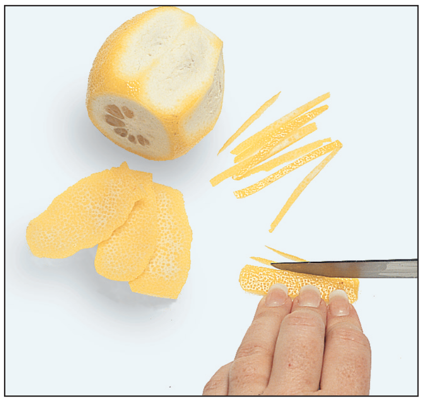
2 Individual segments are then removed by gently cutting alongside each membrane.

▶ PROCEDURE FOR ZESTING CITRUS FRUITS



A five-hole zester is used to remove paper-thin strips of the colored rind.

▶ PROCEDURE FOR CUTTING CITRUS PEELS



Large strips of citrus zest may be used as a garnish or to flavor soups or sauces.

HYBRIDS AND VARIETIES

Several fruits are extremely responsive to selective breeding and crossbreeding and have been toyed with by botanists and growers since at least the time of ancient Rome. Two distinct products are recognized: hybrids and varieties. **Hybrids** result from crossbreeding fruits from different species that are genetically unalike. The result is a unique product. Citrus is particularly responsive to hybridization. **Varieties** result from breeding fruits of the same species that have different qualities or characteristics. Breeding two varieties of apples, for example, produces a third variety with the best qualities of both parents.

EXOTICS

Improved transportation has led to the increasing availability (although sporadic in some areas) of exotic or unusual fresh fruits such as figs, persimmons, pomegranates, prickly pears, rhubarb and star fruits. Other exotic fruits, such as breadfruit, durian, feijoa and loquat, are still available only on a limited basis from specialty purveyors and are not discussed here.

FIGS



Calimyrna Figs

Figs (Fr. *figues*) are the fruit of ficus trees. They are small, soft, pear-shaped fruits with an intensely sweet flavor and rich, moist texture made crunchy by a multitude of tiny seeds. Fresh figs can be sliced and served in salads or with cured meats such as prosciutto. They can also be baked, poached or used in jams, preserves or compotes.

Dark-skinned figs, known as Mission figs, are a variety planted at Pacific Coast missions during the 18th century. They have a thin skin and small seeds and are available fresh, canned or dried. The white-skinned figs grown commercially include the White Adriatic, used principally for drying and baking, and the all-purpose Kadota. The most important domestic variety, however, is the Calimyrna. These large figs have a rich yellow color and large nutty seeds. Fresh Calimyrna figs are the finest for eating out of hand; they are also available dried.

For the best flavor, figs should be fully ripened on the tree. Unfortunately, fully ripened figs are very delicate and difficult to transport. Most figs are in season from June through October; fresh Calimyrna figs are available only during June.

GOOSEBERRIES



Cape Gooseberries

Several varieties of gooseberry (Fr. *groseille maquereau*) are cultivated for culinary purposes. One well-known variety is the European gooseberry, a member of the currant family that grows on spiny bushes in cool, moist regions of the Northern Hemisphere. Its berries can be relatively large, like a small plum, but are usually less than 1 inch (2.5 centimeters) in diameter. The skin, which is firm and smooth or only slightly hairy, can be green, white (actually gray-green), yellow or red. The tart berries contain many tiny seeds. They are eaten fresh or used for jellies, preserves, tarts and other desserts or as a traditional accompaniment to rich or fatty dishes, such as goose and mackerel. North American gooseberry varieties are smaller, perfectly round, and pink to deep red at maturity. Although more prolific, these varietals lack flavor and are generally considered inferior to European gooseberries.

Cape gooseberries, also known as physalis, ground cherries and poha, are unrelated to European and American gooseberries. Native of Peru, they became popular during the 19th century along the African Cape of Good Hope, for which they are named. Australia and New Zealand are currently the largest producers. Cape gooseberries are covered with a paper-thin husk or calyx. About the size of a cherry, they have a waxy, bright orange skin and many tiny seeds. Their flavor is similar to coconut and oranges, but tarter. Cape gooseberries may be eaten raw, made into jam or used in desserts. Fresh, they make an especially striking garnish.

GUAVA



Guava

Guava (GWAH-vah) are a small, oval or pear-shaped fruit with a strong fragrance and a mild, slightly grainy flesh. They are excellent in jams and preserves, and guava juice is available plain or blended with other tropical fruit juices. Guava paste, a thick, sliceable gel, is a popular treat throughout Central America and the Caribbean. Guava will ripen if stored at room temperature and should be slightly soft and fully ripened for the best flavor.

LYCHEES

The lychee (LEE-chee), also spelled *litchi* or *leechee,* is the fruit of a large tree native to southern China and Southeast Asia. The fruits, which grow in clusters, are oval to round, red and about 1 inch (2.5 centimeters) in diameter. The tough outer skin encloses juicy, white, almost translucent flesh and one large seed. Neither the skin nor the seed are edible. The fruit travels well and is now cultivated in Florida and Hawaii, so supplies are relatively stable. Lychees are eaten fresh out of hand or juiced, and are widely available canned or dried. Fresh lychees are mild but sweet with a pleasant perfume.



Lychees

MANGOSTEENS

The mangosteen, another native of Southeast Asia, is cultivated in Java, Sumatra and the Philippines. Mangosteens (no relation to mangos) are the size of a small orange, with flattened ends. They have a thick, hard, deep reddish-purple rind with hard white petal-shaped protrusions at the stem end. The interior flesh is snow-white and segmented, looking something like a mandarin orange. The texture is juicy and delicate with a slightly astringent flavor. Because the fruit must ripen on the tree and keeps only a short time, it is rarely found fresh outside of local markets. Mangosteens are usually eaten fresh, although canned fruit and mangosteen juice is available.



Mangosteens

PERSIMMONS

Persimmons, sometimes referred to as kaki or Sharon fruits, are a bright orange, acorn-shaped fruit with a glossy skin and a large papery blossom. The flesh is bright orange and jellylike, with a mild but rich flavor similar to honey and plums. Persimmons should be peeled before use; any seeds should be discarded. Select bright orange fruits and refrigerate only after they are completely ripe. When ripe, persimmons will be very soft and the skin will have an almost translucent appearance.

Ripe persimmons are delicious eaten raw; halved and topped with cream or soft cheese or peeled, sliced and added to fruit salads. Persimmon bread, muffins, cakes and pies are also popular. Underripe persimmons are almost inedible, however. They are strongly tannic with a chalky or cottony texture.

Persimmons are tree fruits grown in subtropical areas worldwide, although the Asian varieties—now grown in California—are the most common. Fresh persimmons are available from October through January.



Persimmons

POMEGRANATES

An ancient fruit native to Persia (now Iran), pomegranates (POM-uh-gran-uhtz) have long been a subject of poetry and a symbol of fertility. Pomegranates are round, about the size of a large orange, with a pronounced calyx. The skin forms a hard shell with a pinkish-red color. The interior is filled with hundreds of small, red seeds (which are, botanically, the actual fruits) surrounded by juicy red pulp. An inedible yellow membrane separates the seeds into compartments. Pomegranates are sweet-sour, and the seeds are pleasantly crunchy. The bright red seeds make an attractive garnish. Pomegranate juice is a popular beverage in Mediterranean cuisines, and grenadine syrup is made from concentrated pomegranate juice.

Select heavy fruits that are not rock-hard, cracked or heavily bruised. Whole pomegranates can be refrigerated for several weeks. Pomegranates are available from September through December; their peak season is in October.



Pomegranates

PRICKLY PEARS

Prickly pear fruits, also known as cactus pears and barbary figs, are actually the berries of several varieties of cactus. They are barrel- or pear-shaped, about the size of a large egg. Their thick, firm skin is green or purple with small sharp



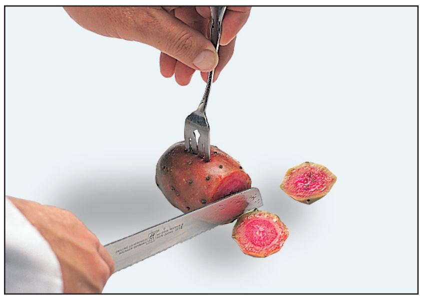
Prickly Pears

pins and nearly invisible stinging fibers. Their flesh is spongy, sweet and a brilliant pink-red, dotted with small black seeds. Prickly pears have the aroma of watermelon and the flavor of sugar-water.

Once peeled, prickly pears can be diced and eaten raw, or they can be puréed for making jams, sauces, custards or sorbets, to which they give a vivid pink color. Prickly pears are especially common in Mexican and southwestern cuisines.

Select fruits that are full-colored, heavy and tender, but not too soft. Avoid those with mushy or bruised spots. Ripe prickly pears can be refrigerated for a week or more. Prickly pears are grown in Mexico and several southwestern states and are available from September through December.

▶ PROCEDURE FOR PEELING PRICKLY PEARS



1 To avoid being stung by a prickly pear, hold it steady with a fork, then use a knife to cut off both ends.



2 Cut a lengthwise slit through the skin. Slip the tip of the knife into the cut and peel away the skin by holding it down while rolling the fruit away.



Rambutans

RAMBUTANS

Rambutans (ram-BOOT-enz), the fruit of a tree in the soapberry family, are closely related to lychees. Native to Malaysia, they are now cultivated throughout Southeast Asia. The bright-red, oval fruit is about the size of a small hen's egg, and is covered with long, soft spines, hence the name "hairy lychees." The interior has a white, lightly acidic pulp. Rambutans darken with age, so select brightly-colored fruit with soft, fleshy spines. Rambutans are eaten fresh and used in preserves and ice cream; they are also available canned.



Rhubarb

RHUBARB

Although botanically a vegetable, rhubarb (ROO-barb) is most often prepared as a fruit. It is a perennial plant that grows well in temperate and cold climates. Only the pinkish-red stems are edible; the leaves contain high amounts of oxalic acid, which is toxic.

Rhubarb stems are extremely acidic, requiring large amounts of sugar to create the desired sweet-sour taste. Cinnamon, ginger, orange and strawberry are particularly compatible with rhubarb. It is excellent for pies, cobblers, preserves or stewing. Young, tender stalks of rhubarb do not need to be peeled. When cooked, rhubarb becomes very soft and turns a beautiful light pink color.

Fresh rhubarb is sold as whole stalks, with the leaves removed. Select crisp, unblemished stalks. Rhubarb's peak season is during the early spring, from February through May. Frozen rhubarb pieces are readily available and are excellent for pies, tarts or jams.

STAR FRUITS



Star Fruits

Star fruits, also known as carambola, are oval, up to 5 inches (12.5 centimeters) long, with five prominent ribs or wings running their length. A cross-section cut is shaped like a star. The edible skin is a waxy orange-yellow; it covers a dry, paler yellow flesh. Its flavor is similar to that of plums, sweet but bland. Star fruits do not need to be peeled or seeded. They are most often sliced and added to fruit salad or used as a garnish. Unripe fruits can be cooked in stews or chutneys.

Color and aroma are the best indicators of ripeness. The fruits should be a deep golden-yellow and there should be brown along the edge of the ribs. The aroma should be full and floral. Green fruits can be kept at room temperature to ripen, then refrigerated for up to two weeks. Star fruits are cultivated in Hawaii, Florida and California, though some are still imported from the Caribbean. Fresh fruits are available from August to February.

GRAPES

Grapes (Fr. *raisins;* Sp. *uvas*) are the single largest fruit crop in the world, due, of course, to their use in wine making. This section, however, discusses only table grapes, those grown for eating. Grapes are berries that grow on vines in large clusters. California is the world's largest producer, with more than a dozen varieties grown for table use. Grapes are classified by color as white (which are actually green) or black (which are actually red). White grapes are generally blander than black ones, with a thinner skin and firmer flesh.

The grape's color and most of its flavor are found in the skin. Grapes are usually eaten raw, either alone or in fruit salads. They are also used as a garnish or accompaniment to desserts and cheeses. Dried grapes are known as raisins (Fr. *raisins sec*); usually made from Thompson Seedless or muscat grapes), currants (made from Black Corinth grapes and labeled Zante currants) or sultanas (made from sultana grapes).

Grapes are available all year because the many varieties have different harvesting schedules. Look for firm, unblemished fruits that are firmly attached to the stem. A surface bloom or dusty appearance is caused by yeasts and indicates recent harvesting. Wrinkled grapes or those with brown spots around the stem are past their prime. All grapes should be rinsed and drained prior to use.



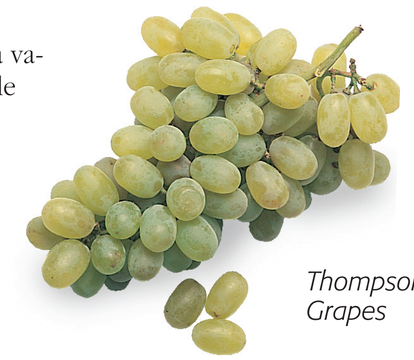
Red Flame Grapes

RED FLAME GRAPES

Red Flame grapes are a seedless California hybrid, second only in importance to the Thompson Seedless. Red Flame grapes are large and round with a slightly tart flavor and variegated red color.

THOMPSON SEEDLESS GRAPES

The most commercially important table grapes are a variety known as Thompson Seedless, which are pale green with a crisp texture and sweet flavor. Their peak season is from June to November. Many are dried in the hot desert sun of California's San Joaquin Valley to produce dark raisins. For golden raisins, Thompson Seedless grapes are treated with sulfur dioxide to prevent browning, then dried mechanically.



Thompson Seedless Grapes

GRAPES INTO WINE

Virtually all the fine wine made in the world comes from varieties of a single grape species, *Vitis vinifera.* It is grown in the United States, Europe, South Africa, South America, the Middle East, Australia and wherever fine wine is made. The variety of grapes used in any given wine determines the wine's character, and most wine-producing countries carefully regulate the growing areas and production of grapes.

American wines are known by their varietal names, whereas European (especially French) wines are generally known by the vineyard's location. The major varietals of wine grapes and the wines in which they are used are listed here.

Grape Varietal	Wine
Pinot Noir	red Burgundy and champagne
Chardonnay	white Burgundy, Chablis and champagne
Syrah	Côte Rotie and Hermitage
Cabernet Sauvignon	Bordeaux and red Graves
Sauvignon Blanc	Sauterne, white Graves, fumé blanc and Sancerre
Merlot	Saint-Emilion and for blending with Cabernet Sauvignon
Zinfandel	red and white zinfandel (California claims a virtual monopoly)
Chenin Blanc	Vouvray

OTHER TABLE GRAPES

Of the table grapes containing seeds, the most important varieties are the Concord, Ribier and Emperor. They range from light red to deep black, and all three are in season during the autumn. Concord grapes, one of the few grape varieties native to the New World, are especially important for making juices and jellies.



Concord Grapes

MELONS

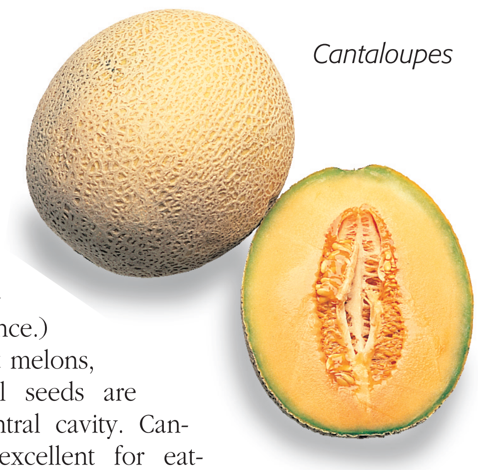
Like pumpkins and cucumbers, melons are members of the gourd family (*Cucurbitaceae*). The dozens of melon varieties can be divided into two general types: sweet (or dessert) melons and watermelons. Sweet melons have a tan, green or yellow netted or farrowed rind and dense, fragrant flesh. Watermelon has a thick, dark green rind surrounding crisp, watery flesh.

Melons are almost 90 percent water, so cooking destroys their texture, quickly turning the flesh to mush. Most are served simply sliced, perhaps with a bit of lemon or lime juice. Melons also blend well in fruit salads or with rich, cured meats such as prosciutto. Melons may be puréed and made into sorbet or chilled, uncooked soup.

Melons should be vine-ripened. A ripe melon should yield slightly and spring back when pressed at the blossom end (opposite the stem). It should also give off a strong aroma. Avoid melons that are very soft or feel damp at the stem end. Ripe melons may be stored in the refrigerator, although the flavor will be better at room temperature. Slightly underripe melons can be stored at room temperature to allow flavor and aroma to develop.

CANTALOUPES

American cantaloupes, which are actually muskmelons, are sweet melons with a thick, yellow-green netted rind, a sweet, moist, orange flesh and a strong aroma. (European cantaloupes, which are not generally available in this country, are more craggy and furrowed in appearance.)



Cantaloupes

As with all sweet melons, the many small seeds are found in a central cavity. Cantaloupes are excellent for eating alone and are especially good with ham or rich meats.

Avoid cantaloupes with the pronounced yellow color or moldy aroma that indicates overripeness. Mexican imports ensure a year-round supply, although their peak season is summer.



Casaba Melons

CASABA MELONS

The casaba melon is a teardrop-shaped sweet melon. It has a coarse, yellow skin and a thick, ridged rind; its flesh is creamy white to yellow. Casaba melons

are used like cantaloupes. Casaba melons do not have an aroma, so selection must be based on a deep skin color and the absence of dark or moist patches. Their peak season is during September and October.

CRENSHAW MELONS

Crenshaw (or cranshaw) melons have a mottled, green-yellow ridged rind and orange-pink flesh. They are large pear-shaped sweet melons with a strong aroma. The flesh has a rich, spicy flavor and may be used like cantaloupe. Crenshaws are available from July through October; their peak season is during August and September.



Crenshaw Melons

HONEYDEW MELONS

Honeydew melons are large oval sweet melons with a smooth rind that ranges from white to pale green. Although the flesh is generally pale green, with a mild, sweet flavor, pink- or gold-fleshed honeydews are also available. Like casaba melons, honeydew melons have little to no aroma. They are available almost all year; their peak season is from June through October.



Green Honeydews



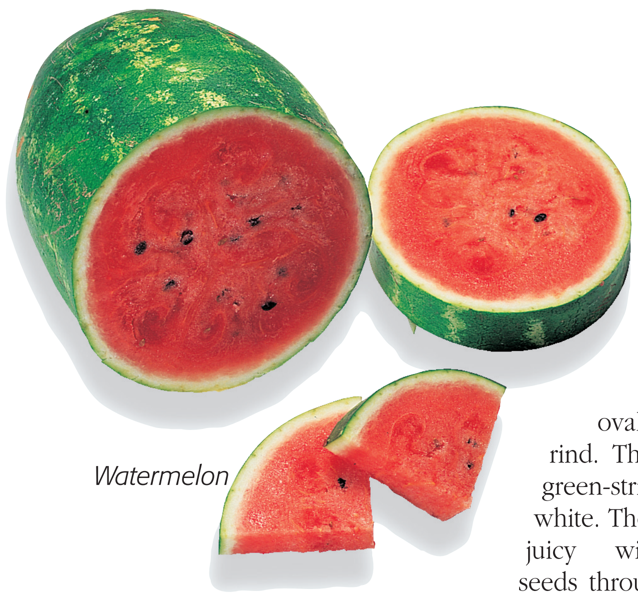
Gold Honeydews

SANTA CLAUS MELONS

Santa Claus or Christmas melons are large, elongated sweet melons with a green-and-yellow-striped, smooth rind. The flesh is creamy white or yellow and tastes like casaba. They are a winter variety, with peak availability during December, which explains the name.



Santa Claus Melons



Watermelon

WATERMELONS

Watermelons are large (up to 30 pounds or 13.5 kilograms) round or oval-shaped melons with a thick rind. The skin may be solid green, green-striped or mottled with white. The flesh is crisp and extremely juicy with small, hard, black seeds throughout. Seedless hybrids are



Gold Watermelon

available. Most watermelons have pink to red flesh, although golden-fleshed varieties are becoming more common.

Watermelons are of a different genus from the sweet melons described earlier. They are native to tropical Africa and are now grown commercially in Texas and several southern states.

POMES

Pomes are tree fruits with thin skin and firm flesh surrounding a central core containing many small seeds called pips or carpels. Pomes include apples, pears and quince.

APPLES

Apples (Fr. *pommes*), perhaps the most common and commonly appreciated of all fruits, grow on trees in temperate zones worldwide. They are popular because of their convenience, flavor, variety and availability.



Rome Red Delicious

Granny Smith Golden Delicious

Apples can be eaten raw out of hand, or they can be used in a wide variety of cooked or baked dishes. They are equally useful in breads, desserts or vegetable dishes and go well with game, pork and poultry. Classic dishes prepared with apples are often referred to as *à la Normande*. Apple juice (cider) produces alcoholic and nonalcoholic beverages and cider vinegar.

Of the hundreds of known apple varieties, only 20 or so are commercially significant in the United States. Several varieties and their characteristics are noted in Table 25.1. Most have a moist, creamy white flesh with a thin skin of yellow, green or red. They range in flavor from very sweet to very tart, with an equally broad range of textures, from firm and crisp to soft and mealy.



McIntosh

In Europe, apples are divided into distinct cooking and eating varieties. Cooking varieties are those that disintegrate to a purée when cooked. American varieties are less rigidly classified. Nevertheless, not all apples are appropriate for all types of cooking. Those that retain their shape better during cooking are the best choices where slices or appearance are important. Varieties with a higher malic acid content break down easily, making them more appropriate for applesauce or juicing. Either type may be eaten out of hand, depending on personal preference.

Although not native to North America, apples are now grown com–mercially in 35 states, with Washington and New York leading in production. Apples are harvested when still sightly underripe, then stored in a controlled atmosphere (temperature and oxygen are greatly reduced) for extended periods until ready for sale. Modern storage techniques make fresh apples available all year, although their peak season is during the autumn.



Gala

When selecting apples, look for smooth, unbroken skins and firm fruits, without soft spots or bruises. Badly bruised or rotting apples should be

Table 25.1 **APPLE VARIETIES**

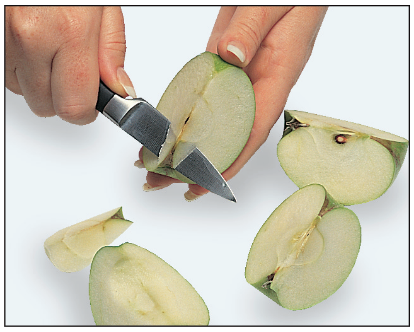
VARIETY	SKIN COLOR	FLAVOR	TEXTURE	PEAK SEASON	USE
Fiji	Yellow-green with red highlights	Sweet-spicy	Crisp	All year	Eating, in salads
Gala	Yellow-orange with red stripes	Sweet	Crisp	Aug.–March	Eating, in salads, sauce
Golden Delicious	Glossy, greenish-gold	Sweet	Semifirm	Sept.–Oct.	In tarts, with cheese, in salads
Granny Smith	Bright green	Tart	Firm and crisp	Oct.–Nov.	Eating, in tarts
Jonathan	Brilliant red	Tart to acidic	Tender	Sept.–Oct.	Eating, all-purpose
McIntosh	Red with green background	Tart to acidic	Soft	Fall	Applesauce, in closed pies
Pippin (Newton)	Greenish-yellow	Tart	Semifirm	Fall	In pies, eating, baking
Red Delicious	Deep red	Sweet but bland	Soft to mealy	Sept.–Oct.	Eating
Rome	Red	Sweet-tart	Firm	Oct.–Nov.	Baking, pies, sauces
Winesap	Dark red with yellow streaks	Tangy	Crisp	Oct.–Nov.	Cider, all-purpose

discarded immediately. They emit quantities of ethylene gas that speed spoilage of nearby fruits. (Remember the saying that "one bad apple spoils the barrel.") Store apples chilled for up to six weeks. Apple peels (the skin) may be eaten or removed as desired, but in either case, apples should be washed just prior to use to remove pesticides and any wax that was applied to improve appearance. Apple slices can be frozen (often with sugar or citric acid added to slow spoilage) or dried.

▶ PROCEDURE FOR CORING APPLES



1 Remove the core from a whole apple with an apple corer by inserting the corer from the stem end and pushing out the cylinder containing the core and seeds.



2 Alternatively, first cut an apple into quarters, then use a paring knife to cut away the core and seeds.



Anjou



Red d'Anjou



Bosc

PEARS

Pears (Fr. *poires*) are an ancient tree fruit grown in temperate areas throughout the world. Most of the pears marketed in the United States are grown in California, Washington and Oregon.

Although literally thousands of pear varieties have been identified, only a dozen or so are commercially significant. Several varieties and their characteristics are noted in Table 25.2. Pear varieties vary widely in size, color and flavor. They are most often eaten out of hand, but can be baked or poached. Pears are delicious with cheese, especially blue cheeses, and can be used in fruit salads, compotes or preserves.



Bartlett



Asian Pears

Asian pears, also known as Chinese pears or apple-pears, are of a different species than common pears. They have the moist, sweet flavor of a pear and the round shape and crisp texture of an apple. They are becoming increasingly popular in the United States, particularly those known as Twentieth Century or Nijisseiki.

When selecting pears, look for fruits with smooth, unbroken skin and an intact stem. Pears will not ripen properly on the tree, so they are picked while still firm and should be allowed to soften before use. Underripe pears may be left at room temperature to ripen. A properly ripened pear should have a good fragrance and yield to gentle pressure at the stem end. Pears can be prepared or stored in the same ways as apples.



Quince

QUINCE

Common quince (*kwence;* Fr. *coing*) resemble large, lumpy yellow pears. Their flesh is hard, with many pips or seeds, and they have a wonderful fragrance. Too astringent to eat raw, quince develop a sweet flavor and pink color when cooked with sugar. Quince are used in meat stews, jellies, marmalades and pies. They have a high **pectin** content and may be added to other fruit jams or preserves to encourage gelling.

▶ **pectin** a gelatin-like carbohydrate obtained from certain fruits; used to thicken jams and jellies

Table 25.2 **PEAR VARIETIES**

VARIETY	APPEARANCE	FLAVOR	TEXTURE	PEAK SEASON	USE
Anjou (Beurre d'Anjou)	Greenish-yellow skin; egg-shaped with short neck; red variety also available	Sweet and juicy	Firm, keeps well	Oct.–May	Eating, poaching, baking
Bartlett (Williams)	Thin yellow skin; bell-shaped; red variety also available	Very sweet, buttery, juicy	Tender	Aug.–Dec.	Eating, canning, in salads
Bosc	Golden-brown skin; long, tapered neck	Buttery	Dry, holds its shape well	Sept.–May	Poaching, baking
Comice	Yellow-green skin; large and chubby	Sweet, juicy	Smooth	Oct.–Feb.	Eating
Seckel	Tiny; brown to yellow skin	Spicy	Very firm, grainy	Aug.–Dec.	Poaching, pickling

Fresh quince, usually imported from South America or southeast Europe, are available from October through January. Select firm fruits with a good yellow color. Small blemishes may be cut away before cooking. Quince will keep for up to a month under refrigeration.

STONE FRUITS

Stone fruits, also known as drupes, include apricots, cherries, nectarines, peaches and plums. They are characterized by a thin skin, soft flesh and one woody stone or pit. Although most originated in China, the shrubs and trees producing stone fruits are now grown in temperate climates worldwide.

The domestic varieties of stone fruits are in season from late spring through summer. They tend to be fragile fruits, easily bruised and difficult to transport and have a short shelf life. Do not wash them until ready to use, as moisture can cause deterioration. Avoid ingesting the pits—most contain toxic acids. Stone fruits are excellent dried and are often used to make liqueurs and brandies.

APRICOTS

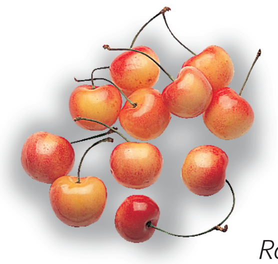


Apricots

Apricots (Fr. *abricots*) are small, round stone fruits with a velvety skin that varies from deep yellow to vivid orange. Their juicy orange flesh surrounds a dark, almond-shaped pit. Apricots can be eaten out of hand, poached, stewed, baked or candied. They are often used in fruit compotes or savory sauces for meat or poultry, and are also popular in quick breads and fruit tarts or pureéd for dessert sauces, jams, custards or mousses.

Apricots have a short season, peaking during June and July, and do not travel well. Select apricots that are well shaped, plump and fairly firm. Avoid ones that are greenish-yellow or mushy. Fresh apricots will last for several days under refrigeration, but the flavor is best at room temperature. If fresh fruits are unavailable, canned apricots are usually an acceptable substitute. Dried apricots and apricot juice (known as nectar) are readily available.

CHERRIES



Rainier Cherries



Bing Cherries

From the northern states, particularly Washington, Oregon, Michigan and New York, come the two most important types of cherry: the sweet cherry and the sour (or tart) cherry.

Sweet cherries (Fr. *cerises*) are round to heart-shaped, about 1 inch (2.5 centimeters) in diameter, with skin that ranges from yellow to deep red to nearly black. The flesh, which is sweet and juicy, may vary from yellow to dark red. The most common and popular sweet cherries are the dark red Bings. Yellow-red Royal Ann and Rainier cherries are also available in some areas.

Sweet cherries are often marketed fresh, made into maraschino cherries or candied for use in baked goods. Fresh sweet cherries have a very short season, peaking during June and July. Cherries will not ripen further after harvesting. Select fruits that are firm and plump with a green stem still attached. There should not be any brown spots around the stem. A dry or brown stem indicates that the cherry is less than fresh. Once the stem is removed, the cherry will deteriorate rapidly. Store fresh cherries in the refrigerator and do not wash them until ready to use.

Sour cherries are light to dark red and are so acidic they are rarely eaten uncooked. The most common sour cherries are the Montmorency and Morello. Most sour cherries are canned or frozen, or cooked with sugar and starch (usually cornstarch or tapioca) and sold as prepared pastry and pie fillings.

Both sweet and sour varieties are available dried.

▶ PROCEDURE FOR PITTING CHERRIES



Remove the stem and place the cherry in the pitter with the indentation facing up. Squeeze the handles together to force out the pit.



Peaches



Nectarines

PEACHES AND NECTARINES

Peaches (Fr. *pêches*) are moderate-sized, round fruits with a juicy, sweet flesh. Nectarines are a variety of peach, the main difference between the two being their skin. Peaches have a thin skin covered with fuzz, while nectarines have a thin, smooth skin. The flesh of either fruit ranges from white to pale orange. Although their flavors are somewhat different, they may be substituted for each other in most recipes.

Peaches and nectarines are excellent for eating out of hand or in dessert tarts or pastries. They are also used in jams, chutneys, preserves and savory relishes, having a particular affinity for Asian and Indian dishes. Although the skin is edible, peaches are generally peeled before being used. (Peaches are easily peeled if blanched first.)

Peaches and nectarines are either freestones or clingstones. With freestones, the flesh separates easily from the stone; freestone fruits are commonly eaten out of hand. The flesh of clingstones adheres firmly to the stone; they hold their shape better when cooked and are the type most often canned.

Select fruits with a good aroma; an overall creamy, yellow or yellow-orange color and an unwrinkled skin free of blemishes. Red patches are not an indication of ripeness; a green skin indicates that the fruit was picked too early and it will not ripen further. Peaches and nectarines will soften but do not become sweeter after harvesting.

The United States, especially California, is the world's largest producer of peaches and nectarines. Their peak season is through the summer months, with July and August producing the best crop. South American peaches are sometimes available from January to May. Canned and frozen peaches are readily available.



Santa Rosa Plums



Damson Plums

PLUMS

Plums (Fr. *prunes*) are round to oval-shaped fruits that grow on trees or bushes. Dozens of plum varieties are known, although only a few are commercially significant. Plums vary in size from very small to 3 inches (7.5 centimeters) in diameter. Their thin skin can be green, red, yellow or various shades of blue-purple.

Plums are excellent for eating out of hand. Plums can also be baked, poached or used in pies, cobblers or tarts; they are often used in jams or preserves, and fresh slices can be used in salads or compotes.

Fresh plums are widely available from June through October; their peak season is in August and September. When selecting plums, look for plump, smooth fruits with unblemished skin. Generally, they should yield to gentle pressure,

although the green and yellow varieties remain quite firm. Avoid plums with moist, brown spots near the stem. Plums may be left at room temperature to ripen, then stored in the refrigerator. Prunes, discussed later, are produced by drying special plum varieties, usually the French Agen.

TROPICALS

Tropical fruits are native to the world's hot, tropical or subtropical regions. Most are now readily available throughout the United States thanks to rapid transportation and distribution methods. All can be eaten fresh, without cooking. Their flavors complement each other and go well with rich or spicy meat, fish and poultry dishes.



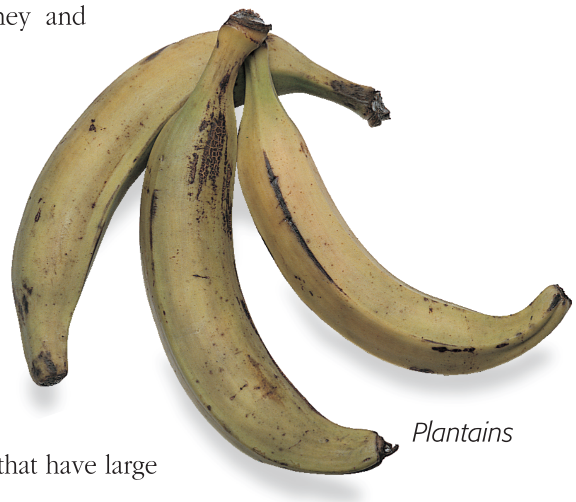
Common Yellow Bananas

BANANAS

Common yellow bananas (Fr. *bananes*) are actually the berries of a large tropical herb. Grown in bunches called hands, they are about 7–9 inches (17.5–22.5 centimeters) long, with a sticky, soft, sweet flesh. Their inedible yellow skin is easily removed.

Properly ripened bananas are excellent eaten out of hand or used in salads. Lightly bruised or overripe fruits are best used for breads or muffins. Bananas blend well with other tropical fruits and citrus. Their unique flavor is also complemented by curry, cinnamon, ginger, honey and chocolate.

Fresh bananas are available all year. Bananas are always harvested when still green, because the texture and flavor will be adversely affected if the fruits are allowed to turn yellow on the tree. Unripe bananas are hard, dry and starchy. Because bananas ripen after harvesting, it is acceptable to purchase green bananas if there is sufficient time for final ripening before use. Bananas should be left at room temperature to ripen. A properly ripened banana has a yellow peel with brown flecks. The tip should not have any remaining green coloring. As bananas continue to age, the peel darkens and the starches turn to sugar, giving the fruits a sweeter flavor. Avoid bananas that have large brown bruises or a gray cast (a sign of cold damage).



Plantains

Plantains, also referred to as cooking bananas, are larger but not as sweet as common bananas. They are frequently cooked as a starchy vegetable in tropical cuisines.

DATES

Dates (Fr. *datte*) are the fruit of the date palm tree, which has been cultivated since ancient times. Dates are about 1–2 inches (2.5–5 centimeters) long, with a paper-thin skin and a single grooved seed in the center. Most are golden to dark brown when ripe.



Medjool Dates

Although dates appear to be dried, they are actually fresh fruits. They have a sticky-sweet, almost candied texture and rich flavor. Dates provide flavor and moisture for breads, muffins, cookies and tarts. They can also be served with fresh or dried fruits, or stuffed with meat or cheese as an appetizer.

Pitted dates are readily available in several packaged forms: whole, chopped or extruded (for use in baking). Whole unpitted dates are available in bulk. Date juice is also available for use as a natural sweetener, especially in baked goods. Although packaged or processed dates are available all year, peak

season for fresh domestic dates is from October through December. When selecting dates, look for those that are plump, glossy and moist.

KIWIS



Kiwis

Kiwis, sometimes known as kiwifruits or Chinese gooseberries, are small oval fruits, about the size of a large egg, with a thin, fuzzy brown skin. The flesh is bright green with a white core surrounded by hundreds of tiny black seeds.

Kiwis are sweet, but somewhat bland. They are best used raw, peeled and eaten out of hand or sliced for fruit salads or garnish. Although kiwis are not recommended for cooking because heat causes them to fall apart, they are a perfect addition to glazed fruit tarts and can be puréed for sorbets, sauces or mousses. Kiwis contain an enzyme similar to that in fresh pineapple and papaya, which has a tenderizing effect on meat and prevents gelling.

MANGOES



Mangoes

Mangoes (Fr. *mangue*) are oval or kidney-shaped fruits that normally weigh between 6 ounces and 1 pound (180 and 500 grams). Their skin is smooth and thin but tough, varying from yellow to orange-red, with patches of green, red or purple. As mangoes ripen, the green disappears. The juicy, bright orange flesh clings to a large, flat pit.

A mango's unique flavor is spicy-sweet, with an acidic tang. Mangoes can be puréed for use in drinks or sauces, or the flesh can be sliced or cubed for use in salads, pickles, chutneys or desserts. Mangoes go well with spicy foods such as curry and with barbecued meats.

Although Florida produces some mangoes, most of those available in the United States are from Mexico. Their peak season is from May through August. Select fruits with good color that are firm and free of blemishes. Ripe mangoes should have a good aroma, and should not be too soft or shriveled. Allow mangoes to ripen completely at room temperature, then refrigerate for up to one week.

FRIEDA AND THE KIWIFRUIT

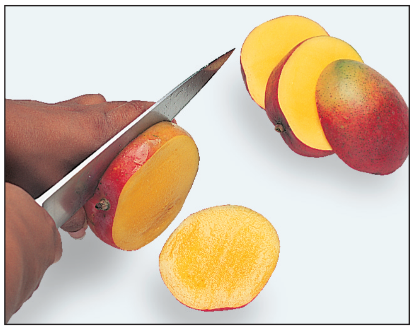
How did a fuzzy brown unknown become a media darling and a hugely viable crop? The answer is, thanks to Frieda Caplan. In 1962 Frieda, founder of Frieda's, Inc., launched her historical worldwide promotion of kiwifruit. Acting on a suggestion that Chinese gooseberries, then grown only in New Zealand, might sell better under the name kiwifruit (the kiwi is the national bird of New Zealand), Frieda unleashed a produce giant. This story of the kiwifruit is studied throughout the world as one of the great successes in food marketing.

In 1980, after 18 years of Frieda's continual, creative, aggressive and expensive marketing, the kiwifruit became a North American star when nouvelle cuisine chefs prominently featured it in their mixes of strawberry, banana, melon and pineapples. Since that time, the question asked most commonly of Frieda's, Inc. is "What will be the next kiwifruit?"

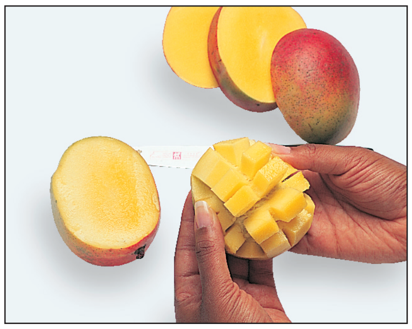
The answer is that there will never be another kiwifruit. When the kiwifruit was accepted into the world's fruit vernacular, there was an unconditional paradigm shift. Today, new specialty produce does not have to go through the rigorous acceptance process inflicted on the kiwifruit. There can never be another kiwifruit because the marketing climate and consumer palate have shifted in a wonderful, irreversible way. Now when a new fruit like red bananas or yellow seedless watermelon comes onto the market, the consuming public does not react with fear and say "Bananas are supposed to be yellow" or "It really isn't watermelon if there aren't any seeds and it's not red." They respond with positive open minds (much the same as Frieda did when she purchased her first flat of kiwifruit in 1962) and a newfound knowledge that new foods will bring quality and variety, not discord, to their diets.

KAREN CAPLAN, Frieda's eldest daughter and President of Frieda's Inc.

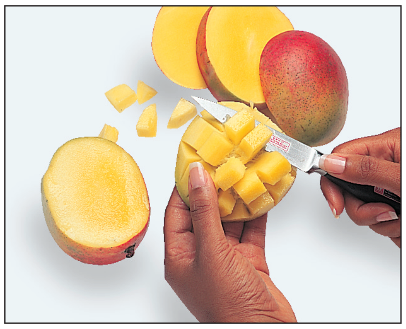
▶ PROCEDURE FOR PITTING AND CUTTING MANGOES



1 Cut along each side of the pit to remove two sections.



2 Each section can then be cubed using the "hedgehog" technique: Make crosswise cuts through the flesh, just to the skin; press up on the skin side of the section, exposing the cubes.



3 The mango may be served like this, or the cubes can be cut off to use in salads or other dishes.

PAPAYAS

The papaya (puh-PIE-yuh) is a greenish-yellow fruit shaped rather like a large pear and weighing 1–2 pounds (500–1000 grams). When halved, it resembles a melon. The flesh is golden to reddish-pink; its center cavity is filled with round, silver-black seeds resembling caviar. Ripe papayas can be eaten raw, with only a squirt of lemon or lime juice. They can also be puréed for sweet or spicy sauces, chilled soups or sorbets.



Papayas

Papayas contain **papain,** which breaks down proteins, and therefore papayas are an excellent meat tenderizer. Meats can be marinated with papaya juice or slices before cooking. Papain, however, makes fresh papayas unsuitable for use in gelatins because it inhibits gelling. Unripe (green) papayas are often used in pickles or chutneys, and can be baked or stewed with meat or poultry.

▶ **papain** an enzyme found in papayas that breaks down proteins; used as the primary ingredient in many commercial meat tenderizers

Papaya seeds are edible, with a peppery flavor and slight crunch. They are occasionally used to garnish fruit salads or add flavor to fruit salsas and compotes.

Papayas are grown in tropical and subtropical areas worldwide. Although they are available year-round, their peak season is from April through June. Select papayas that are plump, with a smooth, unblemished skin. Color is a better determinant of ripeness than is softness: The greater the proportion of yellow to green skin color, the riper the fruit. Papayas may be held at room temperature until completely ripe, then refrigerated for up to one week.



Red Papayas

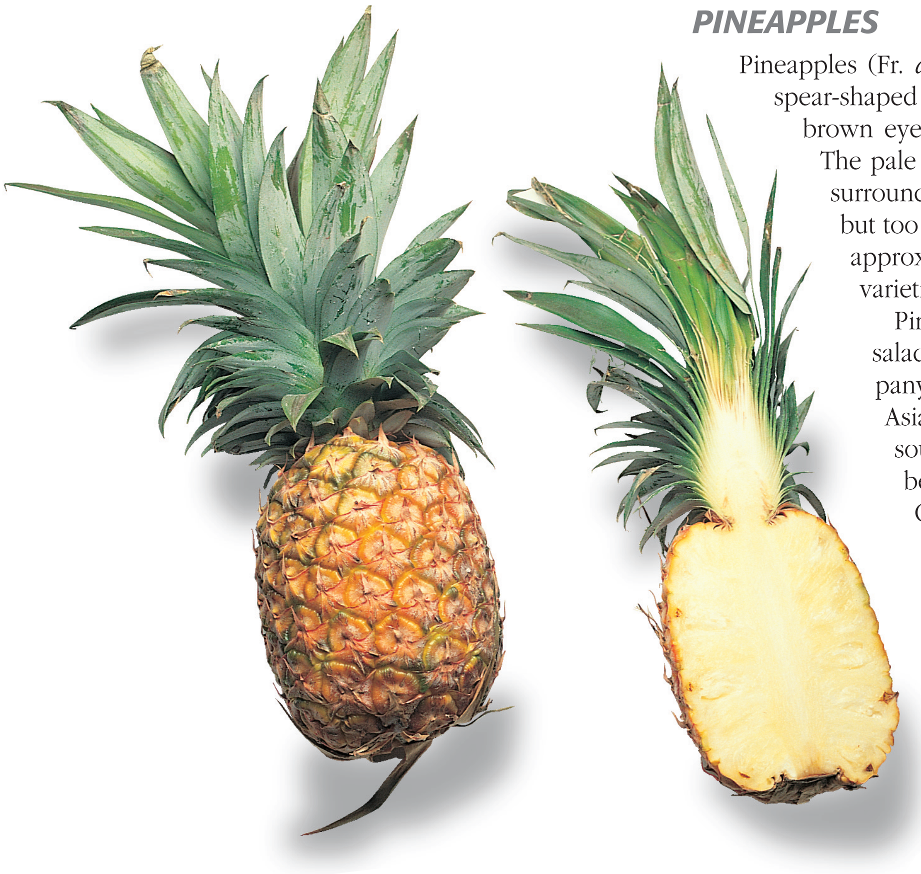
PASSION FRUITS

Passion fruits (Fr. *granadillas*) have a firm, almost shell-like purple skin with orange-yellow pulp surrounding large, black, edible seeds. They are about the size and shape of large hen eggs, with a sweet, rich and unmistakable citrusy flavor. The pulp is used in custards, sauces and ice creams.



Passion Fruits

Select heavy fruits with dark, shriveled skin and a strong aroma. Allow them to ripen at room temperature, if necessary, then refrigerate. Passion fruits are now grown in New Zealand, Hawaii and California and should be available all year, although their peak season is in February and March. Bottles or frozen packs of purée are readily available and provide a strong, true flavor.



PINEAPPLES

Pineapples (Fr. *ananas*) are the fruit of a shrub with sharp spear-shaped leaves. Each fruit is covered with rough, brown eyes, giving it the appearance of a pine cone. The pale yellow flesh, which is sweet and very juicy, surrounds a cylindrical woody core that is edible but too tough for most uses. Most pineapples weigh approximately 2 pounds (1 kilogram), but dwarf varieties are also available.

Pineapples are excellent eaten raw, alone or in salads. Slices can be baked or grilled to accompany pork or ham. The cuisines of Southeast Asia incorporate pineapple into various curries, soups and stews. Pineapple juice is a popular beverage, often used in punch or cocktails. Canned or cooked pineapple can be added to gelatin mixtures, but avoid using fresh pineapple; an enzyme (bromelin) found in fresh pineapple breaks down gelatin.

Pineapples do not ripen after harvesting. They must be left on the stem until completely ripe, at which time they are extremely perishable. The vast majority of pineapples come from Hawaii. Fresh pineapples are available all year, with peak supplies in March through June. Select heavy fruits with a strong, sweet aroma and rich color. Avoid those with dried leaves or soft spots. Pineapples should be used as soon as possible after purchase. Pineapples are also available canned in slices, cubes or crushed, dried or candied.

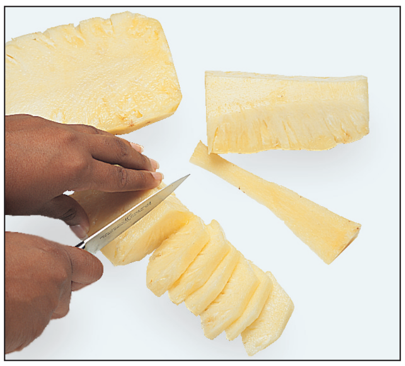
▶ PROCEDURE FOR TRIMMING AND SLICING PINEAPPLES



1 Slice off the leaves and stem end. Stand the fruit upright and cut the peel off in vertical strips.



2 Cut the peeled fruit in quarters, then cut away the woody core.



3 The flesh can then be cut as desired.

Nutrition

Most fruits are quite nutritious. They have a high water content (usually 75 to 95 percent) and low protein and fat contents, all of which makes them low in calories. They are also an excellent source of fiber, and the sugar content of ripe fruits is a good source of energy. Some fruits, such as citrus, melons and strawberries, contain large amounts of vitamin C (which may be destroyed, however, by cooking or processing). Deep yellow and green fruits, such as apricots, mangoes and kiwis, are high in vitamin A; bananas, raisins and figs are a good source of potassium.

Purchasing Fresh Fruits

Fresh fruits have not been subjected to any processing (such as canning, freezing or drying). Fresh fruits may be ripe or unripe, depending on their condition when harvested or the conditions under which they have been stored. In order to use fresh fruits to their best advantage, it is important to make careful purchasing decisions. The size of each piece of fruit, its grade or quality, its ripeness on delivery and its nutritional content may affect your ability to use the fruit in an appropriate and cost-effective manner.

GRADING

Fresh fruits traded on the wholesale market may be graded under the USDA's voluntary program. The grades, based on size and uniformity of shape, color and texture as well as the absence of defects, are U.S. Fancy, U.S. No. 1, U.S. No. 2 and U.S. No. 3. Most fruits purchased for food service operations are U.S. Fancy. Fruits with lower grades are suitable for processing into sauces, jams, jellies or preserves.

RIPENING

Several important changes take place in a fruit as it ripens. The fruit reaches its full size; its pulp or flesh becomes soft and tender; its color changes. In addition, the fruit's acid content declines, making it less tart, and its starch content converts into the sugars fructose and glucose, which provide the fruit's sweetness, flavor and aroma.

Unfortunately, these changes do not stop when the fruit reaches its peak of ripeness. Rather, they continue, deteriorating the fruit's texture and flavor and eventually causing spoilage.

Depending upon the species, fresh fruits can be purchased either fully ripened or unripened. Figs and pineapples, for example, ripen only on the plant and are harvested at or just before their peak of ripeness, then rushed to market. They should not be purchased unripened as they will never attain full flavor or texture after harvesting. On the other hand, some fruits, including bananas and pears, continue to ripen after harvesting and can be purchased unripened.

With most harvested fruits, the ripening time as well as the time during which the fruits remain at their peak of ripeness can be manipulated. For instance, ripening can be delayed by chilling. Chilling slows down the fruit's **respiration rate** (fruits, like animals, consume oxygen and expel carbon dioxide). The slower the respiration rate, the slower the conversion of starch to sugar. For quicker ripening, fruit can be stored at room temperature.

respiration rate the speed with which the cells of a fruit use up oxygen and produce carbon dioxide during ripening

Ripening is also affected by ethylene gas, a colorless, odorless hydrocarbon gas. Ethylene gas is naturally emitted by ripening fruits and can be used to encourage further ripening in most fruits. Apples, tomatoes, melons and bananas

give off the most ethylene and should be stored away from delicate fruits and vegetables, especially greens. Fruits that are picked and shipped unripened can be exposed to ethylene gas to induce ripening just before sale. Conversely, if you want to extend the life of ripe fruits a day or two, isolate them from other fruits and keep them well chilled.

Fresh fruits will not ripen further once they are cooked or processed. The cooking or processing method applied, however, may soften the fruits or add flavor.

PURCHASING

Fresh fruits are sold by weight or by count. They are packed in containers referred to as crates, bushels, cartons, cases, lugs or flats. The weight or count packed in each of these containers varies depending on the type of fruit, the purveyor and the state in which the fruits were packed. For example, Texas citrus is packed in cartons equal to 7⁄10 of a bushel; Florida citrus is packed in cartons equal to 4⁄5 of a bushel. Sometimes fruit size must be specified when ordering. A 30-pound case of lemons, for example, may contain 96, 112 or 144 individual lemons, depending on their size.

Some fresh fruits, especially melons, pineapples, peaches and berries, are available trimmed, cleaned, peeled or cut. Sugar and preservatives are sometimes added. They are sold in bulk containers, sometimes packed in water. These items offer a consistent product with a significant reduction in labor costs. The purchase price may be greater than that for fresh fruits, and flavor, freshness and nutritional qualities may suffer somewhat from the processing.

▶ PURCHASING AND STORING PRESERVED FRUITS

Preservation techniques are designed to extend the shelf life of fruits in essentially fresh form. These methods include irradiation, acidulation, canning, freezing and drying. Except for drying, these techniques do not substantially change the fruits' texture or flavor. Canning and freezing can also be used to preserve cooked fruits.

Preserves such as jellies and jams are cooked products and are discussed later in this chapter.

IRRADIATED FRUITS

As described in Chapter 22, Vegetables, some fruits can be subjected to ionizing radiation to destroy parasites, insects and bacteria. The treatment also slows ripening without a noticeable effect on the fruits' flavor and texture. Irradiated fruits must be labeled "treated with radiation," "treated by irradiation" or with the symbol shown in Figure 22.1.

ACIDULATION

Apples, pears, bananas, peaches and other fruits turn brown when cut. Although this browning is commonly attributed to exposure to oxygen, it is actually caused by the reaction of enzymes.

Enzymatic browning can be retarded by immersing cut fruits in an acidic solution such as lemon or orange juice. This simple technique is sometimes referred to as **acidulation.** Soaking fruits in water or lemon juice and water (called acidulated water) is not recommended. Unless a sufficient amount of salt or sugar is added to the water, the fruits will just become mushy. But if enough salt or sugar is added to retain texture, the flavor will be affected.

CANNED FRUITS

Almost any type of fruit can be canned successfully; pineapple and peaches are the largest sellers. In commercial canning, raw fruits are cleaned and placed in a sealed container, then subjected to high temperatures for a specific amount of time. Heating destroys the microorganisms that cause spoilage, and the sealed environment created by the can eliminates oxidation and retards decomposition. But the heat required by the canning process also softens the texture of most fruits. Canning has little or no effect on vitamins A, B, C and D because oxygen is not present during the heating process. Canning also has no practical effect on proteins, fats or carbohydrates.

In *solid pack* cans, little or no water is added. The only liquid is from the fruits' natural moisture. *Water pack* cans have water or fruit juice added, which must be taken into account when determining costs. *Syrup pack* cans have a sugar syrup—light, medium or heavy—added. The syrup should also be taken into account when determining food costs, and the additional sweetness should be considered when using syrup-packed fruits. Cooked fruit products such as pie fillings are also available canned.

Canned fruits are purchased in cases of standard-sized cans (see Appendix II). Once a can is opened, any unused contents should be transferred to an appropriate storage container and refrigerated. Cans with bulges should be discarded immediately, without opening.

FROZEN FRUITS

Freezing is a highly effective method for preserving fruits. It severely inhibits the growth of microorganisms that cause fruits to spoil. Freezing does not destroy nutrients, although the appearance or texture of most fruits can be affected because of their high water content. This occurs when ice crystals formed from the water in the cells burst the cells' walls.

Many fruits, especially berries and apple and pear slices, are now individually quick-frozen (IQF). This method employs blasts of cold air, refrigerated plates, liquid nitrogen, liquid air or other techniques to chill the produce quickly. Speeding the freezing process can greatly reduce the formation of ice crystals.

Fruits can be trimmed and sliced before freezing and are also available frozen in sugar syrup, which adds flavor and prevents browning. Berries are frozen whole, while stone fruits are usually peeled, pitted and sliced. Fruit purées are also available frozen.

Frozen fruits are graded as U.S. Grade A (Fancy), U.S. Grade B (Choice or Extra Standard), or U.S. Grade C (Standard). The "U.S." indicates that a government inspector has graded the product, but packers may use grade names without an actual inspection if the contents meet the standards of the grade indicated.

IQF fruits can be purchased in bulk by the case. All frozen fruits should be sealed in moistureproof wrapping and kept at a constant temperature of 0°F (−18°C) or below. Temperature fluctuations can cause freezer burn.


Golden Raisins


Currants


Kiwis


Apricots


Persimmons


Apples

DRIED FRUITS

Drying is the oldest known technique for preserving fruits, having been used for more than 5000 years. When ripe fruits are dried, they lose most of their moisture. This concentrates their flavors and sugars and dramatically extends shelf life. Although most fruits can be dried, plums (prunes), grapes (raisins, sultanas and currants), apricots and figs are the fruits most commonly dried. The drying method can


Pears

be as simple as leaving ripe fruits in the sun to dry naturally or the more cost-efficient technique of passing fruits through a compartment of hot, dry air to quickly extract moisture.

Dried fruits actually retain from 16 to 25 percent residual moisture, which leaves them moist and soft. They are often treated with sulfur dioxide to prevent browning (oxidation) and to extend shelf life. Dried fruits may be eaten out of hand; added to cereals or salads; baked in muffins, breads, pies or tarts; stewed for chutneys or compotes or used as a stuffing for roasted meats or poultry. Before use, dried fruits may be softened by steeping them for a short time in a hot liquid such as water, wine, rum, brandy or other liquor. Some dried fruits should be simmered in a small amount of water before use.

Store dried fruits in airtight containers to prevent further moisture loss; keep in a dry, cool area away from sunlight. Dried fruits may mold if exposed to both air and high humidity.

▶ Juicing

▶ **juice** the liquid extracted from any fruit or vegetable

▶ **nectar** the diluted, sweetened juice of peaches, apricots, guavas, black currants or other fruits, the juice of which would be too thick or too tart to drink straight

▶ **cider** mildly fermented apple juice; nonalcoholic apple juice may also be labeled cider

Fruit juice is used as a beverage, alone or mixed with other ingredients, and as the liquid ingredient in other preparations. Juice can be extracted from fruits (and some vegetables) in two ways: pressure and blending.

Pressure is used to extract juice from fruits such as citrus that have a high water content. Pressure is applied by hand-squeezing or with a manual or electric reamer. All reamers work on the same principle: A ribbed cone is pressed against the fruit to break down its flesh and release the juice. Always strain juices to remove seeds, pulp or fibrous pieces.

A blender or an electric juice extractor can be used to liquify less-juicy fruits and vegetables such as apples, carrots, tomatoes, beets and cabbage. The extractor pulverizes the fruit or vegetable, then separates and strains the liquid from the pulp with centrifugal force.

Interesting and delicious beverages can be made by combining the juice of one or more fruits or vegetables: pineapple with orange, apple with cranberry, strawberry with tangerine and papaya with orange. Color should be considered when creating mixed-juice beverages, however. Some combinations can cause rather odd color changes. Although yellow and orange juices are not a problem, those containing red and blue flavonoid pigments (such as Concord grapes, cherries, strawberries, raspberries and blueberries) can create some unappetizing colors. Adding an acid such as lemon juice helps retain the correct red and blue hues.

▶ Applying Various Cooking Methods

Although most fruits are edible raw and typically served that way, some fruits can also be cooked. Commonly used cooking methods are broiling and grilling, baking, sautéing, deep-frying, poaching, simmering and preserving.

When cooking fruits, proper care and attention are critical. Even minimal cooking can render fruits overly soft or mushy. To combat this irreversible process, sugar can be added. When fruits are cooked with sugar, the sugar will be absorbed slowly into the cells, firming the fruits. Acids (notably lemon juice) also help fruits retain their structure. (Alkalis, such as baking soda, cause the cells to break down more quickly, reducing the fruits to mush.)

DETERMINING DONENESS

There are so many different fruits with such varied responses to cooking that no one standard for doneness is appropriate. Each item should be evaluated on a recipe-by-recipe basis. Generally, however, most cooked fruits are done when

they are just tender when pierced with a fork or the tip of a paring knife. Simmered fruits, such as compotes, should be softer, cooked just to the point of disintegration.

You can avoid overcooking fruits by remembering that some carryover cooking will occur through the residual heat contained in the foods. Always rely on subjective tests—sight, feel, taste and aroma—rather than the clock.

DRY-HEAT COOKING METHODS

BROILING AND GRILLING

Fruits are usually broiled or grilled just long enough to caramelize sugars; cooking must be done quickly in order to avoid breaking down the fruits' structure. Good fruits to broil or grill are pineapples, apples, grapefruits, bananas, persimmons and peaches. The fruits may be cut into slices, chunks or halves as appropriate. A coating of sugar, honey or liqueur adds flavor, as do lemon juice, cinnamon and ginger.

When broiling fruits, use an oiled sheet pan or broiling platter. When grilling fruits, use a clean grill grate or thread the pieces onto skewers. Only thick fruit slices will need to be turned or rotated to heat fully. Broiled or grilled fruits can be served alone, as an accompaniment to meat, fish or poultry or as topping for ice creams or custards.

▶ PROCEDURE FOR BROILING OR GRILLING FRUITS

1. Select ripe fruits and peel, core or slice as necessary.
2. Top with sugar or honey to add flavor and aid caramelization.
3. Place the fruits on the broiler platter, sheet pan or grill grate.
4. Broil or grill at high temperatures, turning as necessary to heat the fruits thoroughly but quickly.

BROILED GRAPEFRUIT

RECIPE 25.1

Yield: 8 Servings **Method:** Broiling

Ruby grapefruits	4	4
Sweet sherry	2 Tbsp.	30 ml
Brown sugar	4 Tbsp.	60 ml

1. Cut each grapefruit in half (perpendicular to the segments), then section with a sharp knife, carefully removing any visible seeds.
2. Sprinkle the grapefruit halves with the sherry and sugar.
3. Arrange on a baking sheet and place under a preheated broiler. Cook briefly, only until well heated and the sugar caramelizes. Serve immediately.

Approximate values per serving: **Calories** 70, **Total fat** 0 g, **Saturated fat** 0 g, **Cholesterol** 0 mg, **Sodium** 0 mg, **Total carbohydrates** 16 g, **Protein** 1 g, **Vitamin C** 80%, **Claims**—fat free; no sodium

BAKING

After washing, peeling, coring or pitting, most pomes, stone fruits and tropicals can be baked to create hot, flavorful desserts. Fruits with sturdy skins, particularly apples and pears, are excellent for baking alone, as their skin (peel) holds in moisture and flavor. They can also be used as edible containers by filling the cavity left by coring with a variety of sweet or savory mixtures.

Combinations of fruits can also be baked successfully; try mixing fruits for a balance of sweetness and tartness (for example, strawberries with rhubarb or apples with plums).

Several baked desserts are simply fruits (fresh, frozen or canned) topped with a crust (called a *cobbler*), strudel (called a *crumple* or *crisp*) or batter (called a *buckle*). Fruits, sometimes poached first, can also be baked in a wrapper of puff pastry, flaky dough or phyllo dough to produce an elegant dessert.

▶ PROCEDURE FOR BAKING FRUITS

1. Select ripe but firm fruits and peel, core, pit or slice as necessary.
2. Add sugar or any flavorings.
3. Wrap the fruits in pastry dough if desired or directed in the recipe.
4. Place the fruits in a baking dish and bake uncovered in a moderate oven until tender or properly browned.

RECIPE 25.2

BAKED APPLES



Yield: 8 Servings **Method:** Baking

Apples, Red or Golden Delicious	8	8
Raisins	6 oz.	180 g
Orange zest	1½ Tbsp.	23 g
Brown sugar	4 oz.	120 g

1. Rinse and core each apple. The peels should be scored or partially removed to allow the pulp to expand without bursting the skin during baking.
2. Plump the raisins by soaking them in boiling water for 10 minutes. Drain the raisins thoroughly.
3. Combine the raisins, orange zest and brown sugar. Fill the cavity of each apple with this mixture.
4. Stand the apples in a shallow baking dish. Add enough water to measure about ½ inch (1.2 centimeters) deep.
5. Bake the apples at 375°F (190°C) for 15 minutes. Reduce the temperature to 300°F (150°C) and continue baking until the apples are tender but still hold their shape, approximately 1 hour. Occasionally, baste the apples with liquid from the baking dish.

Approximate values per apple: **Calories** 220, **Total fat** 0.5 g, **Saturated fat** 0 g, **Cholesterol** 0 mg, **Sodium** 10 mg, **Total carbohydrates** 52 g, **Protein** 1 g, **Vitamin C** 15%, **Claims**—low fat, no cholesterol, very low sodium, good source of fiber

SAUTÉING

Fruits develop a rich, syrupy flavor when sautéd briefly in butter, sugar and, if desired, spices or liqueur. Cherries, bananas, apples, pears and pineapples are good choices. They should be peeled, cored and seeded as necessary and cut into uniform-size pieces before sautéing.

For dessert, fruits are sautéed with sugar to create a caramelized glaze or syrup. The fruits and syrup can be used to fill crêpes or to top spongecakes or ice creams. Liquor may be added and the mixture flamed (flambéed) in front of diners, as with Bananas Foster (page 818).

For savory mixtures, onions, shallots or garlic are often added.

In both sweet and savory fruit sautés, the fat used should be the most appropriate for the finished product. Butter and bacon fat are typical choices.

▶ PROCEDURE FOR SAUTÉING FRUITS

1. Peel, pit and core the fruits as necessary and cut into uniform-size pieces.
2. Melt the fat in a hot sauté pan.

3 Add the fruit pieces and any flavoring ingredients. Do not crowd the pan, as this will cause the fruit to stew in its own juices.

4 Cook quickly over high heat.

SAVORY FRUIT

RECIPE 25.3



Yield: 1 pt. (500 ml) **Method:** Sautéing

Onions, fine dice	6 oz.	180 g
Whole butter or bacon fat	1 oz.	30 g
Apples (tart) or peaches, peeled	3	3
Apricots	3	3
Granulated sugar	4 oz.	120 g
Hot paprika	TT	TT
Salt and white pepper	TT	TT

1 Sweat the onions in the butter or bacon fat without browning.

2 Slice the apples or peaches and apricots into thin, even pieces. Add the apples to the onions and cook for 1–2 minutes. Add the apricots.

3 Sprinkle the sugar over the fruits and cook, uncovered, over medium heat until tender. Season with paprika, salt and white pepper.

4 Serve warm as an accompaniment to roast pork, game or other meat.

Approximate values per 1-oz. (30-g) serving: **Calories** 60, **Total fat** 1.5 g, **Saturated fat** 1 g, **Cholesterol** 5 mg, **Sodium** 50 mg, **Total carbohydrates** 12 g, **Protein** 0 g, Vitamin A 4%, **Claims**—low fat; low cholesterol; low sodium

DEEP-FRYING

Few fruits are suitable for deep-frying. Apples, bananas, pears, pineapples and firm peaches mixed in or coated with batter, however, produce fine results. These fruits should be peeled, cored, seeded and cut into evenly sized slices or chunks. They may also need to be dried with paper towels so that the batter or coating can adhere.

Fruit fritters are also a popular snack or dessert item. Fritters contain diced or chopped fish, shellfish, vegetables or fruits bound together with a thick batter and deep-fried. Because frying time is very short, the main ingredient is usually precooked. Fritters are spooned or dropped directly into the hot fat; they form a crust as they cook. Popular examples are clam fritters, corn fritters, artichoke fritters and apple fritters.

▶ PROCEDURE FOR DEEP-FRYING FRUIT—FRITTERS

1 Cut, chop and otherwise prepare the food to be made into fritters.

2 Precook any ingredients if necessary.

3 Prepare the batter as directed.

4 Scoop the fritters into deep fat at 350°F (180°C), using the swimming method.

5 Cook until done. The fritters should be golden brown on the outside and moist but set on the inside.

6 Remove the fritters from the fat and hold them over the fryer, allowing the excess fat to drain off. Transfer the food to a hotel pan either lined with absorbent paper or fitted with a rack. Serve hot.

7 If the fritters are to be held for later service, place them under a heat lamp.

RECIPE 25.4

APPLE FRITTERS

Yield: 100 Fritters, 2 in. (5 cm) each **Method:** Deep-frying

Eggs, separated	6	6
Milk	1 pt.	500 ml
Flour	1 lb.	450 g
Baking powder	1 Tbsp.	15 ml
Salt	1 tsp.	5 ml
Sugar	2 oz.	60 g
Cinnamon, ground	1/2 tsp.	2 ml
Apples, peeled, cored, medium dice	1 lb. 8 oz.	700 g
Powdered sugar	as needed	as needed

1. Combine the egg yolks and milk.
2. Sift together the flour, baking powder, salt, sugar and cinnamon. Add the dry ingredients to the milk-and-egg mixture; mix until smooth.
3. Allow the batter to rest 1 hour.
4. Stir the apples into the batter.
5. Just before the fritters are to be cooked, whip the egg whites to soft peaks and fold into the batter.
6. Scoop the fritters into deep fat at 350°F (180°C), using the swimming method. Cook until done.
7. Dust with powdered sugar and serve hot.

Variation: *Banana Fritters*—Omit the cinnamon and apples. Add 3 tablespoons (45 milliliters) of finely grated orange zest, 4 fluid ounces (120 milliliters) of orange juice and 2 large bananas, peeled and diced (not puréed).

Approximate values per fritter: **Calories** 60, **Total fat** 4 g, **Saturated fat** 1 g, **Cholesterol** 15 mg, **Sodium** 5 mg, **Total carbohydrates** 6 g, **Protein** 1 g



1 Adding the dry ingredients to the liquids.



2 Folding the egg whites into the batter.



3 Dropping the fritters into the deep fat.



4 Dusting the fritters with powdered sugar.

MOIST-HEAT COOKING METHODS

POACHING

One of the more popular cooking methods for fruits is poaching. Poaching softens and tenderizes fruits and infuses them with additional flavors such as spices or wine. Poached fruits can be served hot or cold and used in tarts or pastries or as an accompaniment to meat or poultry dishes.

The poaching liquid can be water, wine, liquor or sugar syrup. (As noted earlier, sugar helps fruits keep their shape, although it takes longer to tenderize fruits poached in sugar syrup.) The low poaching temperature (185°F/85°C)

allows fruits to soften gradually. The agitation created at higher temperatures would damage them.

Cooked fruits should be allowed to cool in the flavored poaching liquid or syrup. Most poaching liquids can be used repeatedly. If they contain sufficient sugar, they can be reduced to a sauce or glaze to accompany the poached fruits.

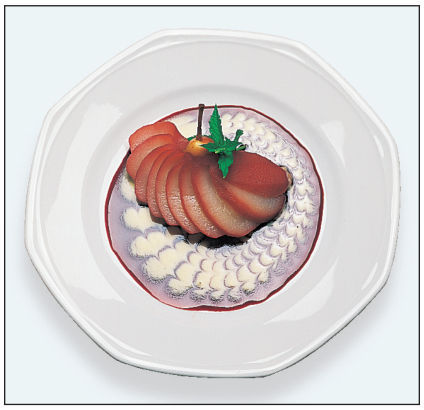
▶ PROCEDURE FOR POACHING FRUITS

1. Peel, core and slice the fruits as necessary.
2. In a sufficiently deep, nonreactive saucepan, combine the poaching liquid (usually water or wine) with sugar, spices, citrus zest and other ingredients as desired or as directed in the recipe.
3. Submerge the fruits in the liquid. Place a circle of parchment paper over the fruits to help them stay submerged.
4. Place the saucepan on the stove top over a medium-high flame; bring to a boil.
5. As soon as the liquid boils, reduce the temperature. Simmer gently.
6. Poach until the fruits are tender enough for the tip of a small knife to be easily inserted. Cooking time depends on the type of fruit used, its ripeness and the cooking liquid.
7. Remove the saucepan from the stove top and allow the liquid and fruits to cool.
8. Remove the fruits from the liquid and then refrigerate. The liquid can be returned to the stove top and reduced until thick enough to use as a sauce or glaze or refrigerated for further use.

PEARS POACHED IN RED WINE

RECIPE 25.5

Yield: 8 Servings   **Method:** Poaching



Ripe pears, Anjou or Bartlett	8	8
Zinfandel wine	52 fl. oz.	1500 ml
Whole peppercorns	8–10	8–10
Vanilla bean	1	1
Granulated sugar	12 oz.	340 g
Fresh basil, chopped	1 oz.	30 g
Orange zest	from 1 orange	from 1 orange

1. Peel and core the pears, leaving the stems intact.
2. Combine the remaining ingredients in a large nonreactive saucepan. Arrange the pears in the liquid in a single layer.
3. Place the pears on the stove top over a medium-high flame. Bring to just below a boil, then immediately reduce the heat and allow the liquid to simmer gently. Cover with a round of parchment paper if necessary to keep the pears submerged.
4. Continue poaching the pears until tender, approximately 1 to 1½ hours. Remove the saucepan from the stove and allow the pears to cool in the liquid.
5. Remove the pears from the poaching liquid and return the liquid to the stove top. Reduce until the liquid is thick enough to coat the back of a spoon, then strain.
6. Serve the pears chilled or at room temperature in a pool of the reduced wine syrup.

Approximate values per 7-oz. (210-g) serving: **Calories** 410, **Total fat** 1.5 g, **Saturated fat** 0 g, **Cholesterol** 0 mg, **Sodium** 35 mg, **Total carbohydrates** 91 g, **Protein** 6 g, **Vitamin A** 40%, **Calcium** 90%, **Iron** 110%, **Claims**—low fat; no cholesterol; low sodium; high fiber

SIMMERING

Simmering techniques are used to make stewed fruits and compotes. Fresh, frozen, canned and dried fruits can be simmered or stewed. As with any moist-heat cooking method, simmering softens and tenderizes fruits. The liquid used can be water, wine or the juices naturally found in the fruits. Sugar, honey and spices may be added as desired. Stewed or simmered fruits can be served hot or cold, as a first course, a dessert or an accompaniment to meat or poultry dishes.

▶ PROCEDURE FOR SIMMERING FRUITS

1. Peel, core, pit and slice the fruits as necessary.
2. Bring the fruits and cooking liquid, if used, to a simmer. Cook until the fruit is tender.
3. Add sugar or other sweeteners as desired or as directed in the recipe.

RECIPE 25.6

DRIED FRUIT COMPOTE

Yield: 2 lb. (1 kg) **Method:** Simmering

Dried apricots	5 oz.	150 g
Prunes, pitted	5 oz.	150 g
Dried pears or apples	5 oz.	150 g
Dried peaches	5 oz.	150 g
Water, hot	24 fl. oz.	720 ml
Cinnamon stick	1	1
Light corn syrup	12 fl. oz.	360 ml
Cointreau	2 fl. oz.	60 ml

1. Coarsely chop the fruits. Place the pieces in a nonreactive saucepan and add the water and cinnamon stick.
2. Bring the mixture to a simmer, cover and cook until tender, approximately 12–15 minutes.
3. Add the corn syrup and Cointreau. Simmer uncovered until thoroughly heated. Serve warm or refrigerate for longer storage.

Approximate values per 1-oz. (30-g) serving: **Calories** 60, **Total fat** 0 g, **Saturated fat** 0 g, **Cholesterol** 0 mg, **Sodium** 15 mg, **Total carbohydrates** 15 g, **Protein** 0 g, **Claims**—fat free; very low sodium



Apple Jelly



Apricot Jam



Orange Marmalade

▶ **concentrate** also known as a fruit paste or compound; a reduced fruit purée, without a gel structure, used as a flavoring

▶ **jam** a fruit gel made from fruit pulp and sugar

▶ **jelly** a fruit gel made from fruit juice and sugar

▶ **marmalade** a citrus jelly that also contains unpeeled slices of citrus fruit

▶ **preserve** a fruit gel that contains large pieces or whole fruits

PRESERVING

Fresh fruits can be preserved with sugar if the fruit and sugar mixture is concentrated by evaporation to the point that microbial spoilage cannot occur. The added sugar also retards the growth of, but does not destroy, microorganisms.

Pectin, a substance present in varying amounts in all fruits, can cause cooked fruits to form a semisolid mass known as a **gel.** Fruits that are visually unattractive but otherwise of high quality can be made into gels, which are more commonly known as **jams, jellies, marmalades** and **preserves.**

The essential ingredients of a fruit gel are fruit, pectin, acid (usually lemon juice) and sugar. They must be carefully combined in the correct ratio for the gel to form. For fruits with a low pectin content (such as strawberries) to form a gel, pectin must be added, either by adding a fruit with a high pectin content (for example, apples or quinces) or by adding packaged pectin.

CONCLUSION



Fruits, whether fresh, frozen, canned or dried, are one of the most versatile and popular of foods. Fruits can be used uncooked or incorporated into a soup, salad, bread, meat dish or dessert. When selecting fresh fruits, it is important to consider seasonal availability, storage conditions and ripeness. When using them, it is important that they be at their peak of ripeness for the best flavor, texture, aroma and appearance.

QUESTIONS FOR DISCUSSION

1. Define ripeness and explain why ripe fruits are most desirable. How does the ripening process affect the availability of some fruits?
2. Describe the proper storage conditions for most fruits. Which fruits emit ethylene gas, and why is this a consideration when storing fruits?
3. Explain why some apple varieties are preferred for cooking, while other varieties are preferred for eating. Which variety is generally preferred for making applesauce?
4. Which types of fruits are best for dry-heat cooking methods? Explain your answer. Why is sugar usually added when cooking any type of fruit?
5. List and describe three ways to prepare fruits for extended storage.
6. Research a tropical or exotic fruit that is not available in your local area. Where is this fruit originally from? How is it eaten or used in cooking? What challenges face producers and importers in bringing this fruit to market in the United States?

ADDITIONAL FRUIT RECIPES

RECIPE 25.7 BANANAS FOSTER

Note: This dish appears in the chapter opening photograph.

BRENNAN'S RESTAURANT, New Orleans, LA

Chef Michael Roussel

Bananas Foster was created in 1951 by Brennan's chef Paul Blangé to promote New Orleans' role as the major port of entry for bananas arriving from Central and South America. The dish was named for Richard Foster, chairman of the New Orleans Crime Commission, a civic group working to clean up the French Quarter. Foster was a good friend to Owen Edward Brennan and a frequent customer at his restaurant. Today Brennan's flambés some 35,000 pounds of bananas each year for this world-famous dessert.

Yield: 4 Servings **Method:** Sautéing

Whole butter	2 oz.	60 g
Brown sugar	8 oz.	225 g
Cinnamon, ground	1/2 tsp.	3 g
Banana liqueur	2 fl. oz.	60 ml
Bananas, cut into quarters	4	4
White rum	2 fl. oz.	60 ml
Vanilla ice cream	4 scoops	4 scoops

1. Combine the butter, sugar and cinnamon in a sauté or flambé pan. Cook over low heat, stirring until the sugar dissolves.
2. Stir in the banana liqueur, then place the bananas in the pan. When the bananas soften and begin to brown, carefully add the rum.
3. Continue to cook until the rum is hot, then tip the pan slightly to ignite the rum. When the flames subside, lift the bananas out of the pan and place 4 pieces over each portion of ice cream. Spoon the warm sauce over the ice cream and serve immediately.

Approximate values per serving: **Calories** 640, **Total fat** 23 g, **Saturated fat** 14 g, **Cholesterol** 70 mg, **Sodium** 65 mg, **Total carbohydrates** 103 g, **Protein** 4 g, **Vitamin A** 20%, **Vitamin C** 20%, **Calcium** 15%, **Iron** 10%, **Claims**—good source of fiber, vitamins A and C, calcium and iron

BRENNAN'S RESTAURANT

After World War II, Owen Edward Brennan, then owner of the French Quarter's Old Absinthe House Saloon, became determined to have the best French and Creole restaurant in New Orleans. Many believe that he succeeded when, in 1946, he opened Brennan's Restaurant on Bourbon Street. This culinary Mecca served breakfast, lunch and dinner to Hollywood stars, national politicians, syndicated columnists and assorted celebrities. Owen's personal success was cut short by his sudden death in 1955, just before Brennan's Restaurant moved into a renovated mansion on Royal Street.

Still located at 417 Royal Street, Brennan's now features 12 elegantly decorated dining rooms with some 550 seats, and the mansion's former slave quarters houses an award-winning wine cellar. Owen's three sons—Pip, Jimmy and Ted—remain the sole owners and operators of their father's world-famous restaurant.

Owen Brennan is credited with popularizing the concept of a formal breakfast in a public restaurant through his "Breakfast at Brennan's" promotion. Not a traditional juice-and-toast meal, however, a typical Brennan's breakfast begins with a gin fizz and includes lamb chops with béarnaise, champagne, shrimp rémoulade, hot French bread, bread pudding and café diable. Through the years, Brennan's chefs have created and popularized some of this country's best known dishes: Eggs Hussarde, Oysters 2-2-2, Crêpes Fitzgerald (strawberry) and Bananas Foster.

Chef Paul Blangé was the ingenious creator of many of Brennan's signature dishes. Today, Chef Michael Roussel maintains Brennan's rich culinary traditions from the kitchen he has called home for 43 years.

FIGS WITH BERRIES AND HONEY MOUSSE

RECIPE 25.8

GREENS, San Francisco, CA
Chef Annie Somerville



Yield: 4 Servings

Raspberries or blackberries	1 pt.	450 ml
Fresh figs such as Black Mission, Kadota or Calmyrna	1 pt.	450 ml
Honey	6 oz.	180 g
Egg yolks	4	4
Salt	TT	TT
Heavy cream	1 pt.	450 ml
Fresh mint	as needed for garnish	

1. Pick through the berries, but do not rinse them because water will dilute their flavor.
2. Rinse the figs and cut them in half, leaving the stem attached.
3. To make the mousse, whisk the honey, yolks and salt together in a bowl over a pan of barely simmering water. Whisk the mixture continuously for 8 minutes. After 5 minutes, the mousse will begin to thicken and the texture will become creamy. Whisk vigorously until the mousse leaves thick ribbons on its surface when poured over itself. Set aside to cool. The texture of the cooled mousse will be stiff and sticky.
4. Whisk 2 tablespoons (30 milliliters) of cream into the mousse, working it until it loosens.
5. Whip the remaining cream until it is firm, fold it into the mousse until it is just incorporated, then whisk the two together. The texture will be light and creamy.
6. Loosely arrange the figs on a platter, sprinkle with the berries, garnish with mint and serve with the mousse.

Approximate values per serving: **Calories** 680, **Total fat** 47 g, **Saturated fat** 28 g, **Cholesterol** 370 mg, **Sodium** 200 mg, **Total carbohydrates** 57 g, **Protein** 6 g, **Vitamin A** 60%, **Vitamin C** 25%

PINEAPPLE PAPAYA SALSA

RECIPE 25.9

Yield: 2 qt. (2 lt)

Tomatoes	3	3
Fresh pineapple	1	1
Fresh papaya	1	1
Green onions, sliced	1 bunch	1 bunch
Fresh cilantro, chopped	1 bunch	1 bunch
Jalapeños, seeded, minced	2	2
Lemon juice	3 Tbsp.	45 ml
Garlic, chopped	1 tsp.	5 ml
Salt	2 tsp.	10 ml

1. Core and dice the tomatoes.
2. Peel and dice the pineapple.
3. Peel, seed and dice the papaya.
4. Combine all the ingredients and chill well.

Approximate values per 1-oz. (30-g) serving: **Calories** 25, **Total fat** 0 g, **Saturated fat** 0 g, **Cholesterol** 0 mg, **Sodium** 330 mg, **Total carbohydrates** 5 g, **Protein** 0 g, **Vitamin C** 45%, **Claims**—fat free; low calorie

RECIPE 25.10

TROPICAL FRUIT SALAD WITH YOGURT DRESSING

Yield: 4 Small Salads

Mango, cut into ½-in. (1.2-cm) cubes	6 oz.	180 g
Pineapple, cut into ½-in. (1.2-cm) cubes	6 oz.	180 g
Papaya, cut into ½-in. (1.2-cm) cubes	4 oz.	120 g
Grapefruit segments	16	16
Pineapple or grapefruit juice	2 fl. oz.	60 ml
Plain nonfat yogurt	4 fl. oz.	120 ml
Honey	2 Tbsp.	30 ml
Fresh lime juice	1 Tbsp.	15 ml
Butterhead lettuce, large leaves, separated and cleaned	4	4
Kiwi, peeled and sliced	1	1
Poppy seeds	1 tsp.	5 ml

1. Mix the mango, pineapple, papaya and grapefruit together with the pineapple or grapefruit juice.
2. To make the dressing, whisk the yogurt, honey and lime juice together.
3. Line the plates with the butterhead lettuce. Arrange the kiwi slices and the fruit salad over the lettuce.
4. Drizzle the dressing over the fruits and top with poppy seeds.

Approximate values per 8-oz. (240-g) serving: **Calories** 170, **Total fat** 1 g, **Saturated fat** 0 g, **Cholesterol** 0 mg, **Sodium** 30 mg, **Total carbohydrates** 38 g, **Protein** 3 g, **Vitamin A** 20%, **Vitamin C** 150%, **Claims**—low fat; no cholesterol; very low sodium; good source of fiber

RECIPE 25.11

SWEET RICOTTA AND MASCARPONE MOUSSE WITH FRESH BERRIES

Yield: 8 Servings

Whole-milk ricotta	24 oz	720 g
Mascarpone	12 oz.	360 g
Sugar	2 oz.	60 g
Orange zest	2 Tbsp.	30 ml
Vanilla extract	1 tsp.	5 ml
Heavy cream	1 pt.	450 ml
Powdered sugar	1 oz.	30 g
Fresh strawberries, cleaned, quartered	1 pt.	450 ml
Fresh raspberries	1 pt.	450 ml
Blackberries	1 pt.	450 ml
Fresh mint	8 sprigs	8 sprigs

1. Process the ricotta, mascarpone and sugar in the bowl of a food processor until smooth and creamy. Transfer to a mixing bowl. Stir the zest and vanilla into the ricotta.
2. Whip the heavy cream with the powdered sugar to stiff peaks.
3. Stir a small amount of the whipped cream into the ricotta mixture to lighten it. Add the remaining whipped cream and gently fold together until well combined.
4. Layer the mousse with the berries in eight large wine glasses. Garnish with berries and a mint sprig. Refrigerate up to 1 hour before serving.

Approximate values per serving: **Calories** 630, **Total fat** 53 g, **Saturated fat** 31 g, **Cholesterol** 180 mg, **Sodium** 120 mg, **Total carbohydrates** 27 g, **Protein** 15 g, **Vitamin A** 40%, **Vitamin C** 70%, **Calcium** 30%

GRATIN OF FRESH BERRIES WITH CRÈME FRAÎCHE

RECIPE 25.12



Yield: 1 Serving

Assorted fresh berries, such as raspberries, blueberries and blackberries	4 oz.	120 g
Crème fraîche	2 fl. oz.	60 ml
Orange liqueur	1 tsp.	5 ml
Brown sugar	1 Tbsp.	15 ml

1. Arrange the berries in an even layer in a shallow, heatproof serving dish.
2. Stir the crème fraîche and orange liqueur together. Spoon this mixture over the berries.
3. Sprinkle the brown sugar over the crème. Place under a broiler or salamander just until the sugar melts. Serve immediately.

Approximate values per serving: **Calories** 210, **Total fat** 7 g, **Saturated fat** 4 g, **Cholesterol** 20 mg, **Sodium** 30 mg, **Total carbohydrates** 33 g, **Protein** 3 g, **Vitamin C** 40%, **Claims**—very low sodium; high fiber

GRILLED FRUIT KEBABS

RECIPE 25.13

Yield: 8 Skewers **Method:** Grilling

Cantaloupe	½ melon	½ melon
Honeydew	¼ melon	¼ melon
Pineapple	½	½
Strawberries	8	8
Brown sugar	2 oz.	60 g
Lime juice	4 fl. oz.	120 ml
Cinnamon, ground	¼ tsp.	1 ml

1. Remove the rind and cut the melons and pineapple into 1-inch (2.5-centimeter) cubes. Hull the strawberries and leave whole.
2. To make the sugar glaze, combine the sugar, lime juice and cinnamon, stirring until the sugar dissolves.
3. Heat the grill and clean the grate thoroughly.
4. Thread the fruits onto kebab skewers, alternating colors for an attractive appearance.
5. Brush the fruits with the sugar glaze. Grill, rotating the skewers frequently to develop an evenly light brown surface.
6. Serve immediately as an appetizer, a garnish for ice cream or an accompaniment to rich meats such as pork or lamb.

Approximate values per skewer: **Calories** 70, **Total fat** 0 g, **Saturated fat** 0 g, **Cholesterol** 0 mg, **Sodium** 10 mg, **Total carbohydrates** 16 g, **Protein** 1 g, **Vitamin C** 50%, **Claims**—fat free; very low sodium

CHERRY CONFIT

RECIPE 25.14

Yield: 4 oz. (120 g)

Red onion, small dice	2 Tbsp.	30 ml
Whole butter	2 tsp.	10 ml

Continued

Dried cherries	3 oz.	90 g
Brandy	1 Tbsp.	15 ml
Port	1 Tbsp.	15 ml
Sherry vinegar	½ tsp.	3 ml

1 Sauté the onion in butter without coloring.
2 Add the cherries. Add the brandy and flambé.
3 Add the port and vinegar; cook until almost dry. Serve warm or at room temperature with charcuterie items or grilled or roasted meats.

Approximate values per 1-oz. (30-g) serving: **Calories** 35, **Total fat** 2 g, **Saturated fat** 1 g, **Cholesterol** 5 mg, **Sodium** 20 mg, **Total carbohydrates** 3 g, **Protein** 0 g, **Claims**—low fat; very low sodium; low calorie

RECIPE 25.15

BRAISED RHUBARB

Yield: 10 lb. (4.5 kg) **Method:** Braising

Tart green apples, peeled and cubed	2 lb. 8 oz.	1.1 kg
Rhubarb, IQF pieces	7 lb.	3.2 kg
Unsalted butter	4 oz.	120 g
Sweet white wine	8 fl. oz.	250 ml
Brown sugar	14 oz.	400 g
Vanilla extract	2 tsp.	10 ml
Cinnamon, ground	1 Tbsp.	15 ml
Nutmeg, ground	¼ tsp.	1 ml
Orange juice	2 fl. oz.	60 ml
Salt	½ tsp.	2 ml

1 Sauté the apples and rhubarb in the butter until they begin to soften.
2 Add the wine and reduce by half. Add the remaining ingredients. Simmer until the rhubarb is very tender.
3 Serve at room temperature in prebaked pastry cups, topped with crème chantilly, or serve warm over ice cream.

Approximate values per 1-oz. (30-g) serving: **Calories** 60, **Total fat** 2 g, **Saturated fat** 0.5 g, **Cholesterol** 0 mg, **Sodium** 25 mg, **Total carbohydrates** 11 g, **Protein** 0 g, **Claims**—low fat; no cholesterol; very low sodium

RECIPE 25.16

BERRY COMPOTE

Yield: 1 pt. (450 ml) **Method:** Simmering

Berries, fresh or frozen	1 pt.	500 ml
Granulated sugar	4 oz.	120 g
Oranges	2	2
Honey	3 fl. oz.	90 ml
Cinnamon stick	1	1
Brandy	3 Tbsp.	45 ml

1 Select an assortment of fresh or frozen berries—strawberries, blueberries, raspberries, blackberries and cherries can be used, depending on availability.
2 Place the fruits and sugar in a nonreactive saucepan. Add the juice from the two oranges. Bring to a simmer over low heat; cook until the fruits are soft but still intact.

3 Strain the mixture, saving both the fruits and the liquid. Return the liquid to the saucepan. Add the finely grated zest from one orange, the honey, cinnamon and brandy.
4 Bring to a boil and reduce until the mixture thickens enough to coat the back of a spoon. Remove from the heat and cool to room temperature.
5 Gently stir the reserved fruits into the sauce, cover and chill.

Approximate values per 1-oz. (30-g) serving: **Calories** 70, **Total fat** 0 g, **Saturated fat** 0 g, **Cholesterol** 0 mg, **Sodium** 0 mg, **Total carbohydrates** 16 g, **Protein** 0 g, **Vitamin C** 15%, **Claims**—fat free; no sodium

SUN-DRIED FRUIT COMPOTE WITH HONEY ICE CREAM

RECIPE 25.17

BISHOP'S RESTAURANT, VANCOUVER, BC
Chefs Michael Allemeier and Dennis Green



Yield: 6 Servings **Method:** Boiling/Steeping

Zinfandel wine	12 fl. oz.	375 ml
Water	1 pt.	500 ml
Granulated sugar	12 oz.	375 g
Sundried fruits, such as apples, cherries and apricots, whole	2 c.	500 ml
Cinnamon stick	1	1
Cloves, whole	2	2
Nutmeg, ground	1/2 tsp.	3 ml
Vanilla bean	1/2	1/2
Black peppercorns	6	6
Fresh ginger, 1-in. (2.5-cm) piece, sliced	1	1
Honey Ice Cream (page 1120)		

1 In a nonreactive saucepan, combine the wine, water, and sugar. Bring to a boil, skim off any scum that forms, and add the fruit and spices.
2 Bring to a boil again, and remove from the heat.
3 Allow the compote to sit for several hours to allow the fruit to absorb some of the syrup.
4 To serve, warm the compote, and top each portion with a scoop of Honey Ice Cream.

Approximate values per 5-oz. (150-g) serving, without ice cream: **Calories** 290, **Total fat** 0 g, **Saturated fat** 0 g, **Cholesterol** 0 mg, **Sodium** 30 mg, **Total carbohydrates** 71 g, **Protein** 1 g, **Claims**—no fat; no cholesterol; very low sodium; good source of fiber

APPLESAUCE

RECIPE 25.18

Yield: 1 qt. (1 lt) **Method:** Simmering

McIntosh apples	4 lb.	1.8 g
Cinnamon sticks	2	2
Granulated sugar	5 oz.	150 g
Lemon juice	1 Tbsp.	15 ml

1 Peel, core and quarter the apples. Place in a saucepan with just enough cold water to cover the bottom of the pan. Add the cinnamon sticks.
2 Bring to a simmer, cover and cook until the apples are tender, approximately 15 minutes.

3 Add the sugar and lemon juice. Simmer for 10 minutes.
4 Remove the cinnamon sticks and press the apples through a food mill.

Approximate values per 1-oz. (30-g) serving: **Calories** 50, **Total fat** 0 g, **Saturated fat** 0 g, **Cholesterol** 0 mg, **Sodium** 0 mg, **Total carbohydrates** 13 g, **Protein** 0 g, **Claims**—fat free; no sodium

RECIPE 25.19

FRESH CRANBERRY-ORANGE SAUCE

Yield: 3 qt. (3 lt) **Method:** Simmering

Granulated sugar	1 lb.	450 g
Orange juice	4 fl. oz.	120 ml
Water	8 fl. oz.	225 ml
Fresh or frozen cranberries	1 lb. 8 oz.	700 g
Cinnamon stick	1	1
Orange liqueur	2 fl. oz.	60 ml
Orange zest, finely grated	2 Tbsp.	30 ml
Orange segments	20	20

1 Combine the sugar, juice and water in a nonreactive saucepan; bring to a boil.
2 Add the cranberries and cinnamon stick and simmer uncovered until the berries begin to burst, approximately 15 minutes. Skim off any foam that rises to the surface.
3 Add the orange liqueur and zest and simmer for another 5 minutes.
4 Remove from the heat and remove the cinnamon stick. Add the orange segments. Cool and refrigerate.

Variations: *Jalapeño-Cranberry Relish*—Omit the orange liqueur, zest and segments. Add 1 fresh jalapeño pepper, minced, and ½ cup (120 milliliters) of hot pepper jelly.

Approximate values per 1-oz. (30-g) serving: **Calories** 25, **Total fat** 0 g, **Saturated fat** 0 g, **Cholesterol** 0 mg, **Sodium** 0 mg, **Total carbohydrates** 6 g, **Protein** 0 g, **Claims**—fat free; no sodium; low calorie

RECIPE 25.20

MANGO CHUTNEY

Yield: 1½ qt. (1.5 lt) **Method:** Simmering

Mangoes, peeled and diced	2 lb.	900 g
Onions, fine dice	4 oz.	120 g
Garlic cloves, minced	2	2
Cider vinegar	8 fl. oz.	250 ml
Dark brown sugar	8 oz.	250 g
Golden raisins	2½ oz.	75 g
Crystallized ginger	4 oz.	120 g
Salt	½ tsp.	2 ml
Cinnamon sticks	2	2
Red pepper flakes	½ tsp.	2 ml
Mustard seeds	½ tsp.	2 ml
Fresh ginger, minced	1 tsp.	5 ml
Lime juice	1 fl. oz.	30 ml

1. Combine the mangoes, onions, garlic, vinegar and sugar in a large, heavy saucepan. Cook until the sugar dissolves.
2. Stir in the raisins, crystallized ginger, salt and spices. Simmer until the onions and raisins are very soft, approximately 45 minutes. Skim foam from the surface as necessary.
3. Stir in the lime juice and adjust the seasonings.
4. Remove from the heat and cool uncovered. The chutney will thicken somewhat as it cools, but should be thinner than fruit preserves.

Approximate values per 1-oz. (30-g) serving: **Calories** 50, **Total fat** 0 g, **Saturated fat** 0 g, **Cholesterol** 0 mg, **Sodium** 30 mg, **Total carbohydrates** 12 g, **Protein** 0 g, **Vitamin C** 10%, **Claims**—fat free; very low sodium